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DEPARTMENT OF AGRICULTURAL ECONOMICS



**FOOD PURCHASING BEHAVIOURS OF THE REFUGEES: A
CASE STUDY OF SAMSUN PROVINCE, TURKEY**

Doctoral Dissertation

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2021

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ÖZET

SIGINMACILARIN GIDA SATIN ALMA DAVRANIŞLARI: SAMSUN İLİ ÖRNEĞİ, TÜRKİYE

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Dünyada sayıları artan mültecilerin davranışlarının incelenmesi önemlidir. Çalışmanın amacı, Türkiye'nin Samsun kentindeki Suriyeli ve Iraklı mültecilerin gıda harcamaları, satın alma noktaları ve gıda güvencelerini etkileyen faktörlerin ortaya konulmasıdır. Araştırmanın verileri, Samsun İlinden seçilen 252 Suriyeli ve Iraklı sığınmacı hanehalkı temsilcisiyle Ekim-Mart 2019 - 2020 döneminde yapılan anketlerden elde edilmiştir. Araştırmada tanımlayıcı analiz yöntemleri olarak Person's korelasyon (r), Ki-Kare, t-testi ve ANOVA testleri, satın alma noktasına etkili faktörlerin indirgenmesi ve analizinde sırasıyla faktör analizi ve doğrusal regresyon modelinden yararlanılmıştır. Araştırma sonuçları sığınmacı hanehalkı büyüklüğünün 5 kişi ve ortalama gelirlerinin 38%'ini gıdaya harcadıklarını göstermektedir. Sığınmacı hane halklarının gıda harcamalarında sırasıyla et, sebze, meyve, süt ürünleri ve tahıllar hakimdir. Sığınmacı hanehalklarının taze sebze ve meyveleri mahalle pazarlarından, et ve süt ürünlerini süpermarketlerden, tahıl ürünlerini ise sığınmacıların marketlerinden satın almayı tercih ettikleri ortaya konulmuştur. Regresyon model sonuçları göre sığınmacı hanehalklarının gıda satın alma noktalarına; sosyo-demografik değişkenlerden uyruk, cinsiyet, hane halkı büyüklüğü, ikamet süresi, ekonomik değişkenlerden hanehalkı sayısı ve gelir düzeyi ile davranışsal değişkenlerden sezon dışı satın alma ve israf edilen gıda miktar değişkenlerinin istatistiki olarak önemli etkileri söz konusudur. Sığınmacı hanehalklarının gıda satın alma seçimlerinde en etkili faktörler ise fiyat, ürün özellikleri ve gıda güvenliğidir. Bununla birlikte, sosyo-demografik faktörlerden uyruk, cinsiyet, medeni durum, yaş ve ikamet edilen ilçenin, ekonomik faktörlerden işçi sayısı ve gelir düzeyi ile davranışsal faktörlerden sezon dışı satın alma ve ödeme şekli değişkenlerinin en az iki gıda kategorisi için sığınmacı hanehalklarının mağaza seçimlerini etkilemektedir. Bununla birlikte araştırma sonuçları, Samsun'daki sığınmacıların %61,8'inin yeterli gıdaya erişemediklerini ortaya koymuştur. Sığınmacı hanehalklarının gıda güvencesini; sosyo-demografik değişkenlerden uyruk, yaş, eğitim düzeyi ve ikamet süresinin, ekonomik değişkenlerden iş durumu ve gelir düzeyinin istatistiki olarak önemli etkileri vardır. Sığınmacı tüketiciler, gıda satın alımlarında fiyattan daha fazla gıdanın güvenli olmasına dikkat etmelidir. Gıda perakendecileri, pazarlama stratejilerini sığınmacıların ihtiyaç ve taleplerini karşılayacak şekilde geliştirmelidirler. Türkiye'deki mültecilerin gıda güvenliği statüsünü iyileştirmek için ekonomik ve istihdam durumunun iyileştirilmesiyle birlikte yeni iş fırsatları

yaratılmalıdır. Özellikle en savunmasız mülteciler arasında gıda güvensizliğini azaltabilecek özel stratejiler ve programlar uygulanmalıdır.

Anahtar Sözcükler: Sığınmacılar, Gıda Harcaması, Mağaza Seçimi, Gıda Güvencesi, Samsun.

ABSTRACT

FOOD PURCHASING BEHAVIOURS OF THE REFUGEES: A CASE STUDY OF SAMSUN PROVINCE, TURKEY

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Increasing the number of refugees in the world is important to study refugee's behavior. The objectives of the study were to examine the factors influencing food expenditure, points of purchase choice, and the food security status among Syrian and Iraqi refugees in Samsun province of Turkey. The data were gathered on the period of October 2019 – March 2020 from surveys conducted with 252 Syrian and Iraqi refugees in Samsun province. Person's correlation (r), Chi-Square, t-test, and ANOVA tests were used for descriptive analysis of the variables, while factor analysis (FA) and multiple linear regression were used, to reduce the number of explanatory variables and to explain influencing factors on food expenditure, points of food purchase, and food security. The results indicated that average household size was 5 members and food expenditure on five categories represented 38% of the total household income. The study also resulted that the local markets were the preferred choice for fresh vegetables and fruit, supermarkets for meat and dairy products, and markets for cereal products. The food expenditure of refugee households was dominated by meat, vegetables, fruit, dairy products, and cereals, respectively. The findings suggested socio- demographic variables as household size, length of stay in Samsun province, economic variables as level of income and behavioural variables as purchasing out of season and wasted amount had significant effects on the food expenditure of refugee households. Price, product characteristics, and health dimensions seem to be the most influential factors on store choice of refugees. However, socio-demographic factors as nationality, gender, marital status, age, and district, economic factors as number of workers and income level, and behavioral factors as buying off-season and payment way had influenced on the refugees' store choices at least for two food categories. The research findings also showed that 61.8% of refugee households could not access to enough foods. The influencing factors on food security were determined by socio-demographic variables as nationality, age, level of education, residence period and district, economic variables as job status and level of income had significant effects on food security status of refugee households. Consumers should pay attention to healthy products such as food safety and organic products more than price. Food retailers should improve marketing strategies taking account into refugees' preferences to fulfill their desires and needs. In order to improve food security status of the refugees, new business opportunities together with the improvement of the economic and

employment situation should be created. To reduce food insecurity for especially the most vulnerable refugees, special strategies and programs should be implemented.

Keywords: Refugees, Food Expenditure, Store Choice, Food Security, Samsun.

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ABBREVIATION

| | |
|----------|--|
| ANOVA | Analysis of Variance |
| FA | Factor Analysis |
| FAO | Food and Agriculture Organization |
| FANTA | Food and Nutrition Technical Assistance |
| FIES | Food Insecurity Experience Scale |
| HFIAS | Household Food Insecurity Status |
| IFAD | International Fund for Agricultural Development |
| GDP | Gross Domestic Product |
| IOM | International Organization Migration |
| KMO | Kaiser Mayer-Olkin |
| PDMM | Provincial Directorate of Migration Management |
| TURKSTAT | Turkish Statistical Institute |
| UN | United Nations |
| UNHCR | United Nation Higher Commissioner for Refugee |
| USAID | United States Agency for International Development |
| VIF | Variance Inflation Factor |
| WFP | World Food Program |

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1. INTRODUCTION

There are differences between immigrant and refugee. Immigrant is defined as a group of people who leaved their countries and moved across an international border or within a state away from his/her habitual place of residence and living in the different countries. Whereas refugee is defined as a person who, "owing to a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group or political opinions, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country (IOM, 2020). The number of refugees in the world increased from 14 to 25.9 million during the last two decades (Figure 1.1).

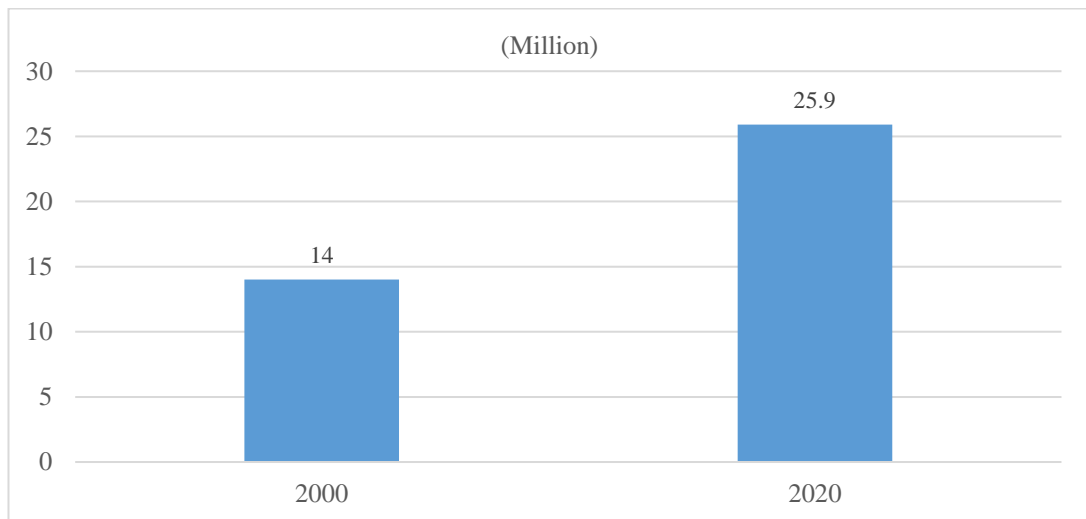


Figure 1. 1. Refugee number in the world (IOM, 2020)

The conflicts in Syria and Iraq were started in 2011 and this caused a huge immigrant or refugee population. The war in Syria and Iraq has left millions of refugees in the neighbouring countries. There were no choices for refugees except to live their countries and travel to other countries. The majority of Syrians and Iraqis chose Turkey a hosting country due to geographic and economics reasons. In that time, Turkish Government followed a policy to keep the borders open in front of refugees. Turkey decided to issue a temporary protection to refugees which enable them to stay in Turkey legally.

In the begining of the war, the number of Syrians in Turkey was small. The number of refugees has increased from 0.66 to 3.9 million in the period of 2013-2019

(Figure 1.2). People of concern include refugees, asylum seekers and stateless. The numbers of immigrants and/or refugees have risen in Turkey during the last years. These immigrants and refugees had come from different countries and ethnicities.

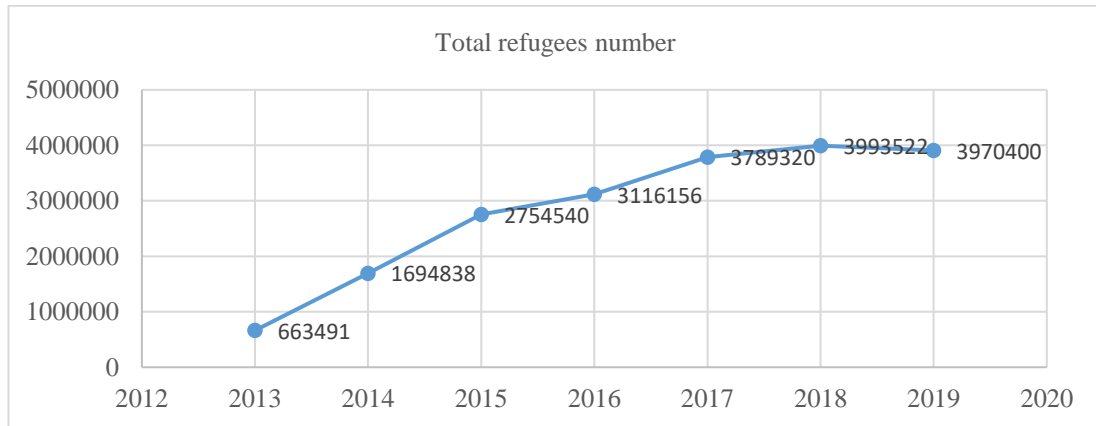


Figure 1. 2. Refugees number in Turkey (UNHCR, 2020)

The Turkish government has extended and provided the assistance to Syrian and Iraqi refugees since the beginning of Syrian crisis. The Turkish government has shifted from an emergency assistance approach to someone that seeks to assist in the medium and long term, including by establishing measures to support refugee integration into the local community. Most of Syrian and Iraqi refugees entered to Turkey by illegal ways. They came to Turkey due to many reasons including instable political conditions and the loss of economic opportunities in their countries. Some of immigrants have lived in camps, while majority of them have lived in houses. Iraqi and Syrian refugees preferred Samsun city, because it is a small city and has more favourable economic conditions. Because of an increase in the number of Syrian and Iraqi refugees, Turkey has problems about security and unstable economic situations.

Figure 1.3 shows the numbers and percentages of refugees and immigrants in Turkey according to their nationalities. Over than 3.9 million refugees and immigrants have lived in Turkey and Turkey has the largest refugee population in the world (UNHCR, 2020). Syrian (91%), Afghans (4.3%) and Iraqi (3.6%) are the largest refugee or immigrant groups in Turkey.

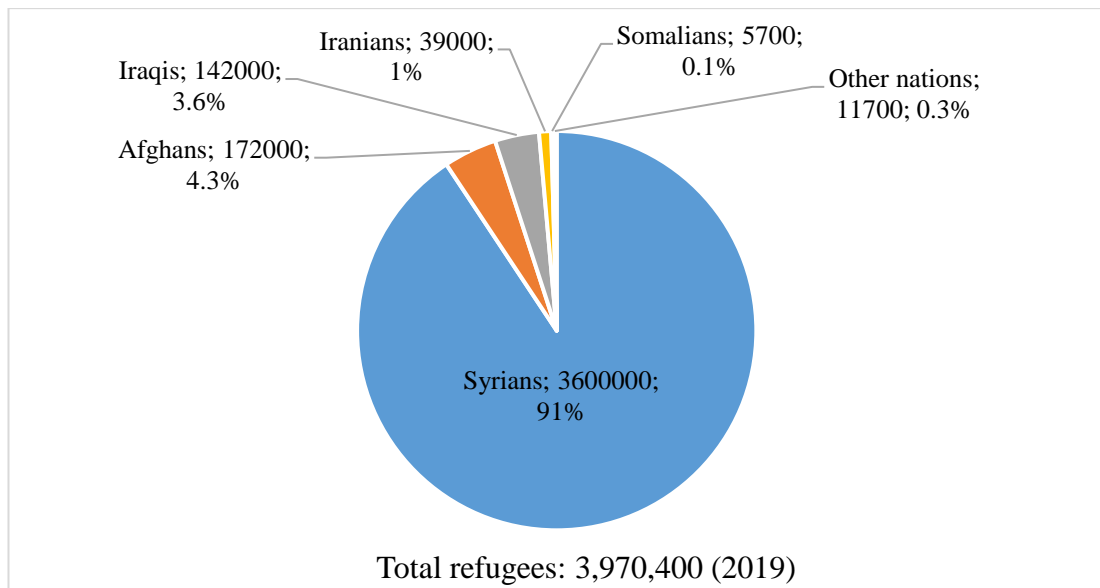


Figure 1. 3. The number of refugees in Turkey (UNHCR, 2019)

Residency in new economic and social environment make immigrants change their behaviours and preferences, and force immigrants to fulfil various consuming behaviours (Sevim, et al., 2016). Migration to another country has important impact on consumer behaviour due to a new society and culture. Food consumption behaviour is influenced by many factors such as culture, social, values and economic factors (Kittler, et al., 2011). The tastes, behaviour and consumption patterns of immigrants are not constant but are changing continually because of the acculturation (Vijaygopal, 2010). Arab immigrants including Syrians and Iraqi face challenges to maintain their cultural practices and to adapt with new food patterns and behaviour (Aljaroudi, 2018). Several studies confirm that ethnicity drives consumption patterns (Costa and Bamossy, 1995). So, marketers have tried to understand a new consumption behaviour of immigrants as the most powerful determinant of consumer behaviour (Cleveland and Chang, 2009).

1.1. Background to the Study

Consumption, consumer and consumer behaviour are associated concepts. Consumer behaviour refers to consumer decisions with respect to consumption, acquisition and disposition, and how select, purchase, and consume of goods and services to satisfy their needs (Solomon, et al., 2006; Schiffman and Kanuk, 2007; Macinnis and Hoyer; 2008; Ramya and Ali, 2016). Moreover, consumer behaviour indicates to how people make their decisions on spending resources such as time, money, and effort on consumption (Hemanth and Shruthi, 2013). Consumer behaviour

is studied to connect between consumer and company that produce food products. Consumer behaviour is a great interest to marketers because those marketers should understand the needs and desires of consumers and how they think.

Consumption is defined as satisfying needs and desires of consumers. This definition has social and economic dimensions (Firat, et al., 2013; Orcan, 2008). Any activity to meet and satisfy need is called consumption (Featherstone, 1996). Contemporary research on consumer behaviour considers a wide range of factors influencing the consumer, and acknowledges a broad range of consumption activities beyond purchasing (Bray, 2008).

Consumer is the most important part in the marketing process. Consumer is a person who identifies needs or desires also he/she searches for products or services to satisfy his/her needs or desires, buys product and then consumes product to satisfy him/her needs and desires (Noel, 2009; Firat et al., 2013). Consumer behaviour include not only the way that individual buy tangible products but also consumer ideas and activities. The marketers rely on the research studies related to consumer behaviour through product planning and development strategies to cover the consumers' needs efficiently (Thangasamy and Patikar, 2014). Consumer is the successful determinant in the marketing organizations.

The current researches on consumer behaviour are focusing on food expenditure, acculturation effect, and store choice. The studies on store choice or how consumer selects, as consequently how he/she selects store and what the factors influencing are? The second dimension is how much they expend? And what are the factors influencing expenditures. The third one is what they purchase? This dimension refers good purchase.

1.2. Food Retailing in Turkey

The changes in consumer variables or behaviours such as interest, values, motives and opinions (Prasad and Reddy, 2007, Kumar, 2012) contributed to the growth of retail formats and varieties on the points of sale. Various outlets offer different choices to consumers in terms of choosing point of sale to buy food products. Concentration and globalization have seen increase in food retailing in Turkey. Different changes have occurred in both the restricting and concentration in the Turkish food retail markets (Koç et al., 2010). Retail stores are rapidly expanding in

many developed and developing countries. Also, the number of food stores has been increasing in the last years.

In Turkey, retail sector has grown significantly through the last years. Turkish retail sector is considered as one of the most important sectors in Turkey. Food retailing includes business that sells food products. All points of sale providing selling food products are called as food retailing. Types of food retailing in Turkey are stated as markets, supermarkets, grocery and street markets. Food retailers are classified into organized/modern grocery retailers, and unorganized/traditional grocery retailers. Organized grocery retailers include various formats or retailers such as discount grocery chains, regional grocery chains and gas station stores. Unorganized grocery retailers include traditional stores or so called bakkal in Turkish. Their sizes are up to 500 squares. In addition to bakkal, there is open air or neighbourhood market called pazar in Turkish. In these markets, fresh products and traditional products are sold. These open-air markets sell their crops and products weekly in neighbourhood. Each neighbourhood market is open in a specific day. Grocery retail stores in Turkey are differently classified as regional grocery chains, national grocery chains and international grocery chains. More than 211 chains were found for groceries in Turkey (Erdogan, 2020). Various outlets offer different choices to consumers in terms of choosing point of sale to buy food products. There are many names for sale points such as retail outlets, sale supplies and retail points and each one has many brands especially supermarkets. The store brands for supermarkets are BIM, A101, ŞOK MIGROS etc. Every type of sale point tries to attract consumers and compete with others using different strategies. Turkish retail sector has grown significantly through the last decade from 72 to 109 billion USD during the last decade (Figure 1.4).

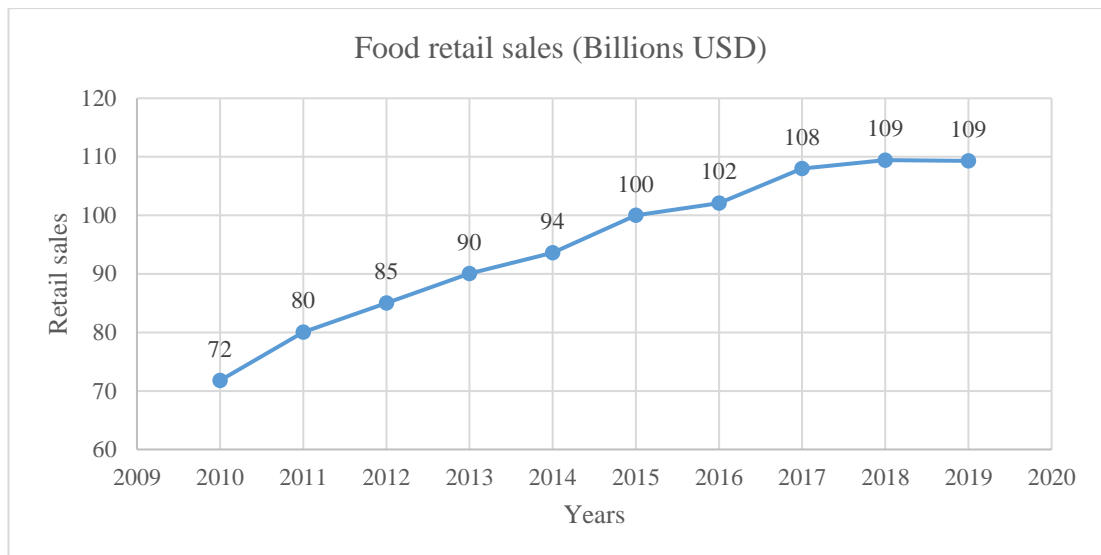


Figure 1. 4. Developments in food retail sales in Turkey (TurkStat, 2020)

1.3. Food Consumption Categories

Food is considered essential in the life of consumers. It provides social and cultural services, and represents a major share of consumer expenditure (Steenkamp, 1997). According to Food and Agriculture Organization (2009), food refers to any substance intended or expected to be ingested by humans, which these substances provide the necessary nutrients to survive life. Foods are categorised under 14 sub-categories as alcoholic beverages, animal fats, cereals (excluding beer), eggs, fish and seafood, fruits (excluding wine) and tree nuts, meat and offal, milk (excluding butter), miscellaneous, starchy roots and pulses, stimulants and spices, sugar and sweeteners, vegetable oils and oil crops and, finally, vegetables (FAO, 2009). Food can be divided into unprocessed and processed food.

Unprocessed food refers to food that cannot be stored for a long time. There are many operations in this food group such as cleaning, portioning, removal of inedible fractions, grating, flaking, squeezing, bottling (in itself), drying, chilling, freezing, and packing. This food group includes parts of plants (leaves, fruit and roots) or animals (muscles and milk), grains, legumes, nuts, harvested tea and coffee, butchering, extraction or gathering from nature (FAO, 2012).

Processed food refers to a series of operations by which unprocessed food are converted into foodstuffs to prolong their duration, enable storage, and reduce (or abolish) time/effort spent in culinary procedures. Also, in this food group, many

substances are used in this process to produce processed food. Many processes are occurred in this food group such as pressure, milling, refining, hydrogenation and hydrolysis, and use of enzymes and additives. This group includes starches and flours, oils and fats, salt, and sugar and sweeteners, and industrial ingredients such as high fructose corn syrup, lactose, and milk and soy proteins (FAO, 2012).

In the current study, we could not cover all food products because of high product diversity, so we focused on main types and necessary categories in our study. In this study, foods are categorized into five groups:

- Vegetables as tomato, potato, cucumber, and onions,
- Fruits as apple, orange, and banana,
- Cereals such as rice, burghul, and lentils,
- Dairy products as milk, yogurt, egg, and cheese,
- Meat products as chicken, beef, and fish.

However, studies on food purchasing behaviour for refugees have been limited in Turkey. Syrian and Iraqi refugees have different socio-demographic, economic and cultural variables. As a result, their consumption behaviour is different. This study is inclusive on food purchasing of Syrian and Iraqi refugees. With the increasing the number of refugees in the world, it is important to understand refugees purchasing behaviour. To understand food purchasing behavior for Iraqi and Syrian refugees living in Samsun province of Turkey, we investigated their food expenditure and attitudes towards points of sale and food security status. There are many types of food retail outlets in Turkey. Small markets, greengroceries, supermarkets, and local markets are considered as the main outlets for purchasing food products.

1.4. Statement of the Problem and Research Questions

In light of increasing refugee population in Turkey, the investigation of food purchasing behavior of Syrian and Iraqi refugees has become an important research area for scholars. Syrian and Iraqi refugees have different culture comparing with Turkish people. Understanding differences and/or similarities between Turkish and refugee households could be useful for food suppliers. To date, there has no study that aims to understand food consumption behavior of Syrian and Iraqi refugees in Turkey. The research problem of this study was organized by reviewing the literature on

consumer and immigrants or refugees' behaviors, points of food purchase, and food security. The research questions that were used in this study are these:

- 1- What are the the socio-demographic, economic, behavioural, and cultural factors of the refugee households?
- 2- What are the factors influencing the food expenditures of the refugee households?
- 3- What are the most purchased food categories?
- 4- What are the refugee household attitudes towards homeland and Turkish products?
- 5- What are the factors influencing the point of food sale choice?
- 6- What are the levels of food security of Syrian and Iraqi refugee households?

1.5. Research Hypotheses

The researcher developed four main hypotheses and nine sub-hypotheses based on the research objectives and questions. The first hypothesis aimed to examine the relationship between the refugee households' socio-demographic, economic and behavioural variables and their food expenditures. The second main hypothesis aimed to examine the refugee households' attitudes towards homeland products and Turkish products. The third hypothesis aimed to examine the relationship between the refugee households' socio-demographic, economic and behavioural variables food security status. The fourth hypothesis aimed to examine the differences between the food security status of Syrian and Iraqi refugees. The fifth hypothesis aimed to examine the relationship between the refugee households' socio-demographic, economic and behavioural variables and their food security status.

H1a. Socio-demographic variables have a significant influence on food expenditure.

H1b. Economic variables have a significant influence on food expenditure.

H1c. Behavioural variables have a significant influence on food expenditure.

H2. There are differences among Syrian and Iraqi refugees towards homeland products and Turkish products.

H3a. Socio-demographic variables have a significant influence on store choice.

H3b. Economic variables have a significant influence on store choice.

H3c. Behavioural variables have a significant influence on store choice.

H4. There are differences among Syrian and Iraqi refugees with regards to food security status.

H5a. Socio-demographic variables have a significant influence on food security.

H5b. Economic variables have a significant influence on food security.

1.6. The Research Questions and Objectives

The objectives of study were listed under two headings:

1.6.1. The Main Objectives

The main aim of this thesis was to determine the factor influencing food expenditure, points of food purchase, and food security of Syrian and Iraqi refugees in Samsun province of Turkey.

1.6.2. The Specific- Objectives

The sub objectives of this thesis were

- To explore the socio-demographic, economic, behavioural, and cultural factors of the refugee households,
- To estimate the refugee households' food expenditures,
- To understand the refugees' attitudes towards homeland and Turkish products,
- To investigate the preferences of refugee households across various points of sale,
- To determine the factors influencing the points of food retail of the refugee households,
- To assess the food security levels of refugee households through different indicators,

1.7. Significance of the Study

Due to increasing the refugee population in the world, it should be conducted scientific research on their food consumption behaviours. Understanding consumer behaviours could improve food marketing and its efficiency. Thus, deep and good understanding of the consumer purchasing behaviours provide benefits for marketing companies to develop their marketing and pricing strategies and to improve their services, products, and distribution channels (Louviere et al., 2000).

The food chain can be divided into three components as consumers, food manufactures, and retailers. Consumer is the most important level in the food chain. Consumption behavior, tastes, values, preferences, and patterns are not constant for

immigrants. At the same time, they learn new consumption behavior. Thus, Papadopoulos et al. (2011) investigated identity, demographics, and consumer behaviours of the immigrants based on international market segmentation across product categories in different countries. Kizgin (2011) examined the differences and similarities of immigrant consumers' attitude and behaviours towards home versus host products. Newman and Sahak (2012) explored purchasing patterns of immigrant groups in the scope of acculturation on ethnocentric behaviours. Sanlier and Karakus (2010) evaluated food purchasing behaviour of consumers from supermarket in Turkey.

This thesis should help suppliers and marketers to understand the refugees' desires and needs for food products. This study will be the first to identify the food purchasing and consumption behaviour for Iraqi and Syrian immigrants in Turkey with a case study of Samsun province. In this study, general food purchasing behaviours of the refugee households was determined. This study could be helpful for food companies to plan their production and marketing activities. The results of this study could be used by policy makers, marketing managers, and food manufacturers to develop policies and marketing plans. Academically, it is expected that the study findings could provide significant contributions in the gap of literature and researchers and academicians to use the current method in their extended researches. Finally, the findings of this study may be useful to both refugees and food retailers to develop their purchase and marketing strategies, respectively.

1.8. Organization of Thesis

The current study consists of six chapters. The first chapter exposes the introduction. The second chapter presents theoretical framework on purchasing behaviour and the factors influencing food consumption behaviour. The third chapter reviews the related literature. The fourth chapter presents materials and methods used in the study. Chapter 5 provides the findings and discussion. Finally, chapter 6 includes the main conclusions and recommendations.

2. THEORETICAL FRAMEWORK FOR PURCHASING BEHAVIOUR AND MARKETING MANAGEMENT

2.1. The Marketing Concept

To understand purchasing behaviour, the relationship between purchasing behaviour and marketing should be examined. Marketing, market and goods, and services are associated concepts. There are widely definitions of marketing. According to American marketing association the marketing is defined as “*all activities performed to allow the flow of goods and services from producer or importer to the final consumer or industrial buyer*” (American marketing association, 2013). FAO defines marketing as “*the set of services involved in moving product or commodity from production point to consumption point*”. According to this definition, marketing plays many functions such as exchange functions (buying, selling, and storage), physical functions (transportation, processing, standardization, and financing) and facilitating functions such as (marketing information) (Crawford, 2006). Kotler et al (2017) define the marketing as “*engaging customers and managing profitable customer relationships*”. The objectives of marketing are to attract new consumers and delivering satisfaction (Kotler et al., 2017). Marketing refers to understanding the needs and desires of consumers and finding ways to meet those needs and desires (Barnard et al., 2012). All concepts of marketing are associated with needs and desires of consumers where needs are basic to human being, but desires are not. Marketing must be understood in new sense satisfying consumer needs (Kotler et al., 2017). Moreover, the marketing concept refers that an organization should seek to make profit by serving the needs of consumer groups. Successful marketing focuses on consumer needs then works backward to device products and services to fulfil the consumers’ needs. The serving the market needs are considered as the keys to achieve organizational objectives (Peter and Donnelly, 2007).

Market is defined as collection of buyers and sellers who transact a particular product (Kotler, 2011). There are five basic markets as manufacturer market, resource market, intermediary markets, government markets, and consumer markets. Marketers market 10 entity types of products and services. We use the term commodity to refer to basic agricultural products that are in original form or that have undergone only primary processing for example cereals, sugar, milk, fruit, vegetables, eggs etc. Commodity marketing includes all the participants in the process of production,

processing and marketing. The participants in these processes are farmers, input suppliers, storage operators, processors, and both wholesalers and retailers. Agricultural marketing passes through seven stages as assembly, transportation, storage, grading, processing, packaging, distribution, and retailing (Crawford, 2006). The agricultural marketing is distinguished from other marketing that government plays a significance role in marketing of farm crops and products (Crawford, 2006). The marketing process includes five steps and all these steps are related to customers. Companies try to understand consumers, create customer value and build strong customer relationships. In the final step, companies reap the rewards of creating superior customer value (Kotler et al., 2017).

2.2. The Theory of Consumption Behaviour

Consumers are the most important focus for companies. The relationship between consumer behaviour and the profession of marketing is fundamental issue (Ramachander, 1988). Consumer refers to individuals or households who buy goods and services for personal consumption (Kotler et al., 2017). The study of consumer behaviour examines products and services that consumers use and buy them from markets. In addition, how these products influence their daily lives, why they buy these products and services, and what are the factors that influence decision of consumers to buy these products and services. Consumer behaviour refers to how consumer, groups, and organization select, buy, dispose, and consume goods and services (Kotler, 2012). The profitable marketing focuses on the understanding and discovery of consumer needs (Peter and Donnelly, 2007). Human needs include physical needs such as food, social needs, and individual needs. Desires and needs of consumers can be fulfilled by products, services, and information (Kotler et al., 2017).

So, the consumer is an essence of this process. The consumer can be defined as person who identifies a need or desire, searches for a product to satisfy this need, buys the product and then consumes the product in order to satisfy the needs and desires (Noel, 2009). In the other words, consumer is any person who is engaged in the consumption process. From a point of view a buyer, it is difficult to make purchase decision because of many options available. For marketers, it is also difficult to understand consumer behaviors. To understand consumer behavior, it should be studied the factors influencing purchase behavior. The study of buying behavior includes consumer behaviors towards products and services. It is also important that

the study of consumer behavior is not only restricted to buy tangible products, but also is related to buying intangible products (services). In addition, consumer behaviour will stay after the purchasing process and what happens after a product is used. Examining consumer behaviour is very important for marketers, marketers need to data concerning consumers and they need answers to these questions:

- Who makes the buying decision?
- What are the factors influencing consumer behaviour?
- When and how does he/she make his/her buying decision?

This study highlights food behaviours of Syrian and Iraqi refugees through investigation the factors influencing purchasing behaviours. Many factors can influence the decision making of consumers and a purchase decision (Rani, 2014). By understanding these factors, the companies could develop their strategies.

2.3. The Factors Influencing Consumption Behaviour

There are several factors such as cultural, economic, social, biological, and psychological that can influence on consumers' food purchasing and consumption behaviour (Kittler et al., 2011; Sobal et al., 2006). Income and prices are considered as the key variables for food consumption. Levels of income and food intake are significant indicators for household welfare (Sabates et al., 2001). According to the economic theory, goods prices and consumer real income are significant determinants to explain in the variations of food consumption. Generally, there are five main factors influencing purchase behaviour of consumer such as cultural, social, personal, economic, and psychological factors (Kotler and Armstrong, 2010). These factors will be detailed in the following part. As a consumer, many factors will influence on his/her decision before buying a product or service, and as a company or marketer should take these factors into considerations in order to understand the consumers well and to improve marketing objectives. A wide range of factors are associated with consumer behaviour. Consumer purchase behaviour is influenced by these major factors as given below.

2.3.1. Cultural Factors

Culture means the ideas, customs, and social behaviour of people or society (Noel, 2009). Culture is important influence on consumer needs, wants, and behavior (Peter and Donnelly, 2007). Cultural factors have significant effects on consumer behaviour. Every culture contains a small group called as sub-cultures including

nationality, religion, racial group, and the same geographical location. Consumer behaviour is considered as a result of a group of processes such as learning, values, preference, and perception. According to Kotler and Armstrong (2010), cultural factors include three main components such as culture, sub-culture, and social class.

2.3.1.1. Culture

Culture is one of the most important factors of consumer behaviour. Culture can be defined as a set of values, preferences, perception, and behaviour that people acquire from his or her family or other institutions (Ramya and Ali, 2016). Culture is not permanent factor, but it changes through the life. Generally, many people share the same values, beliefs, and culture this can be called a culture. In spite of culture, passing from group to another it can change over time. In relation to our research, food consumption behaviour is much related to culture, so every nation or region is distinguished by its food habits.

2.3.1.2. Sub-Culture

Each culture can be divided into small groups and these groups called sub-cultures (Kotler et al., 2017). Sub-culture refers to groups of people with shared values system. Sub-culture includes nationalities, religions, geographic location, and racial groups (Kotler and Armstrong, 2010). Many sub-cultures make up important market segments. Sub-culture refers to values and beliefs of sub-group of the main culture such as nationalities, geographic region, religions, and racial groups. In general, food consumption behaviour of these sub-groups is different from main groups. So, marketers and food manufactures should take account into the habits and behaviours of these sub-groups (Ramya and Ali, 2016).

2.3.1.3. Social Class

Social class means that society can be divided into many classes which each one includes members who share similar interest, income, values, and behaviour. So many factors such as income, level of education, occupation, authority, ownership, life styles, and other variables determine social class (Kotler and Armstrong, 2010). The best indicator that different social class tends to have different attitudes and values is occupation (Peter and Donnelly, 2007). Social class implies that some consumers have more power, money, and opportunities. As a result, some consumers consume certain products and services but others could not (Noel, 2009). In general, there are three main social classes which are upper class, middle class, and lower class. Buying

behaviour differs based on these social classes (Ramya and Ali, 2016). In food consumption, this factor is very common for example; the rich people buy brand products from high quality markets. Social class is important determinant through buying products. Social class means level of education, income, wealth, race, ethnic group, and occupation of the consumers. Lower class tends to buy from markets that are close to home and they avoid buying brand products.

2.3.2. Social Factors

Social factors are the factors that are widespread in the society where consumers live in. Social factors include three main components as family, role, and status that can influence consumer behaviour (Kotler and Armstrong, 2010).

2.3.2.1. Family

Family role influences strongly the buying behaviour. Family through selecting a product affects everyone and the family role is fundamental factor that can influence preference and behaviour of consumer. The marketers are trying to understand husband, wife, and children behaviours. It is important to understand if purchase decision with husband or wife or with their children (Kotler et al., 2017). Child tries to imitate his parent preferences and behaviour through shopping and buying products. Family influences the buying behaviour of a child by two ways: firstly, it influences personality, attitude, perception, and beliefs, and secondly it affects on the decision making of individual.

2.3.2.2. Reference Group

Reference group plays an effective role on consumption of good or service. Reference group means individual or a set of people with whom individual consumers try to imitate them in their behaviours and attitudes. In addition, reference group means a set of people who can influence person attitudes and behaviour. Reference group works as a point of comparison for individual. Reference group influences consumers in two ways: normative and informational influences (Noel, 2009). Individuals try to imitate reference group when they buy products and services. Individual normally has several reference groups when he/she makes the marketing decision (Peter and Donnelly, 2007).

2.3.2.3. Role and Status

The consumer status and its role in the society influence his behaviour. The person position in each group can be defined in terms of both role and status (Kotler et al., 2017). Some people are more force, wealth, fame, and handsome than others. Therefore, some people are trying to buy special kinds of products as a result of their social class and their role in the society. Most people try to consume products that meet their status and role in society (Kotler et al., 2017).

2.3.3. Personal Factors

The personal factors refer to the basic characteristics of a consumer and reflect how individual's response to environment (Nasidi, 2016). Personal factors mean those factors, which distinguish one person from another including demographic factors such as age, income, gender, race, mode, level of education, and other related variables (Kotler and Armstrong, 2010). The personal factors also include responsible member in the family for decision making and from food purchases. These factors influence buying behaviour differently. Tastes of food differ according to age and buying behaviour is affected by level of education and business cycle (Kotler and Armstrong, 2010). Marketers are concerned with the level of income to target specific groups (Noel, 2009).

2.3.4. Economic Factors

Economic situation of consumers plays a main role in their consumption behaviours. The consumers with high income buy more and expensive products. As a result, their total food expenditure will be more. On the other hand, consumers with low income buy less and inexpensive products. As a result, their total food expenditure will be less. Economic factors that influence buyer behavior are explained below.

2.3.4.1. Personal Income and Family Income

Personal income means person income, whereas family income is the total income of all family members. This is very important and can influence buyer behaviour extremely. When these incomes increase, the total expenditure will increase and vice versa.

2.3.4.2. Saving

Saving is also an important factor that influences buyer consumption. In general, more saving from personal or family income means less income to spend on food consumption.

2.3.4.3. Income Expectation

In addition, income expectation is considered one of the important factors effected on buyer consumption. This effect can be explained as: when consumer expects an increase in his or her income, he/she will spend more on food products and vice versa.

2.3.4.4. Other Economic Factors

There are other factors that influence consumption behaviour such as level of inflation, gross domestic product (GDP) etc.

2.3.5. Psychological Factors

The psychological factors are related to psychology of buyer or consumer, where these factors drive his/her actions to get satisfaction. Psychological factors include motivations, attitudes, and beliefs, perception and learning or knowledge which are defined below.

2.3.5.1. Motives

A motive is an internal feeling or force that orients and drives consumer activities toward satisfying a need or desire and getting a goal. In other words, a motive is inner urge that induce consumer or encourage buyer to buy specific products or services (Ramya and Ali, 2016). Motivation means inner state of arousal make consumer to behave the way they do (Noel, 2009). In general, motivation is used to satisfy a need of consumers. Usually, necessary needs such as security and food needs are more important than the others and hence, these needs become motive for consumer to seek satisfaction. The most important factor influencing motivation is personal value.

2.3.5.2. Attitudes and Beliefs

Consumers have specific attitudes and beliefs towards products, and services. Attitude is not determinant factor for consumer behaviour, because the attitudes are changing over time. Attitude is knowledge or positive or negative feeling toward activity or object (Noel, 2009). We earn our attitudes through experience and interaction with other people. The attitudes and beliefs of consumers can be changed

by special campaign from marketers. Thus, marketers should understand consumers' attitudes to make their products or services consistent with these attitudes.

2.3.5.3. Perception

Perception refers how consumers select, organise, and interpret to understand the world around them (Noel, 2009). This process helps us to sense of the world. Five senses are processed to select, organize, and interpret to form meaningful picture of the world (Kotler and Armstrong, 2010). The consumer perception towards product or service influences his/her decision-making. Perception means the process of selecting, organizing, and interpreting the information to produce meaning. The similarity of consumers in some factors does not mean that they purchase the same products because of differences in their perception.

2.3.5.4. Knowledge and Learning

Knowledge means the information of consumer about product, companies, and product categories. Learning describes changes in an individual's behaviour arising from experience (Kotler et al., 2017; Ramachander, 1988). The human behaviour comes from learning (Kotler et al., 2017). Knowledge or learning is a process by which consumers change their behaviours towards products and services after they gain a new information or experience. In addition, it means how consumer buy product and how he/she use product. Knowledge or learning has important effect on consumer behaviour because after experience or new information, consumer can decide whether the products are convinced or not. In some cases, lack of knowledge causes problems to consumers, for example, some consumers think that high price indicates high quality.

2.4. Food Security

Food security has become a fundamental subject for all governments in the world during the last decades. The climatic changes, decreasing in agricultural land, and rising in food prices have affected negatively on the level of food security. The food security is more common challenge in developing countries hosting refugees. According to FAO (2009), food security is a situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. In 2009, stability as a new dimension was added to this definition. Therefore, food

security was defined by FAO based on four dimensions as availability, accessibility, utilization, and stability.

Availability of food refers to availability of food produced locally or imported from abroad. Accessibility means that people or consumers can reach the needed food at all-time (physical access) and they also have enough money for purchase (economic access). Utilization means that consumer must be able to consume suitable food in quantity and quality form. Thus, the food consumed by people must be safety, clean, and healthy. Stability means that ensuring no change in consumed amounts through emergency conditions such as natural disasters (climate and earthquake) or those that are man-made (war and economic crises). Recently, sustainability as a new dimension has appeared and this involves many indicators such as ecology, biodiversity, climate changes, cultural, and economic factors. This dimension may affect food security of future generations (Peng and Berry, 2018). It is concluded that presence one dimension does not ensure another dimension (Ifeoma and Agwa 2014). Thus, food availability does not mean food accessibility.

Different methods have been proposed to measure food security at the household level. FAO, International Fund for Agricultural Development (IFAD), and the World Food Programme (WFP) have proposed some indicators to measure the food security in 2012. Each food security dimension includes a number of indicators (Peng and Berry, 2019). Spending on food is also considered method to measure the food security. Consumption behavior is also used to measure food security indirectly. The measurement of food security for immigrants or refugees differs from others who are in country of origin. Additional factors are identified as being responsible for food insecurity, including low wages, education, job insecurity, and social status (Omidvar et al., 2013). Generally, the proportion of food insecure people is more common in the rural areas due to low income and poor socio-economic conditions (Lorlaman et al., 2014).

2.5. The Legal Status of the Refugees

The Turkish government is considered the principal provider of protection to refugees in Turkey. Registration with the Turkish authorities provides the legal basis for legal residence and to access public services, available assistance and protect refugees against forced return to origin country. Therefore, the refugees who are not registered with the Turkish authorities cannot benefit from the services provided from

the Turkish authorities. The refugees registered in Turkey can access to different services such as health, education, social assistance and work opportunities (UNHCR, 2020).

Registration process is conducted in the Provincial Directorate of Migration Management (PDMM) in the province. Refugees need correct identification information and submit available documents. If refugee does not have any document the registration process conducts based on testimony. After registration process, the Turkish authorities issue temporary protection identity document free of charge (UNHCR, 2020).

The Government of Turkey is working to develop a harmonization policy to assist refugees and migrants with diverse statuses, while encouraging integration. The government of Turkey has organized a plan for ten years aims at developing human development and migration management. The European Union and Turkey government signed an agreement to organize the flow of immigrants from Turkey to European Union. Under this agreement, all irregular immigrants from Turkey to the Greek islands are returned to Turkey. This agreement restricted the refugee's immigration out of Turkey (IOM, 2020). The majority of refugees are living outside of government TACs and they have settled in urban areas alongside all Turkish communities. The refugees have moved into all Turkish states especially big states such as Istanbul, Ankara and Gaziantep. The government of turkey granted all refugees medical insurance. Also, the government of Turkey allowed all refugees to apply for work permits.

3. LITERATURE REVIEW

3.1. Introduction

This chapter aims to review the literature related to food purchasing behaviour in four main fields such as food expenditure, acculturation, store choice, and food security. Some of literatures are about immigrants in other countries and others are about citizen people. This chapter is divided into four sections. The first sub-section reviews and discusses food expenditure and the factors influencing food expenditure and which factors have an influence on buying behaviour of consumers. The second sub-section presents literature on consumer acculturation. The third sub-section reviews store choice and the factors influencing the point of purchase choice and store attributes. The fourth sub-section reviews food security status, its measurements and the factors influencing food security status.

3.2. Food Purchasing Behaviour and Food Expenditure

Consumer behavior has been an interest for researchers for the last decades. Consumer behavior has evolved over the past century through new research methodologies and paradigmatic approaches (Bray, 2008). Consumer behavior can be defined as the process involved when individuals or groups select, purchase, evaluate, acquire, use or dispose of products, services, ideas or experiences to satisfy needs and desires and, to fulfil consumers' needs and desires (Solomon et al., 2006; Schiffman and Kanuk 2007; Noel, 2009; Khan, 2007; Ramya and Ali, 2016). It is concluded from the previous definition that this concept focuses on what, why, how, when, and where a consumer makes purchase. Purchase process is divided into many stages firstly determine what products they want to consume. Then, after selecting the needed products, they estimate how much they can spend. Lastly, they analyze the prices and take the final decision about the products they should consume. The concept of consumer behavior reacted with the conception and growth of modern marketing (Blackwell et al., 2001).

There is no single theory of consumer behavior that may interpret the consumer behavior. Instead, there are various theories, models, and concepts making up this field (Peter and Donnelly, 2007). The models of consumer behavior have been developed since 1940 to understand, describe, and predict of consumer behavior (Chisnall, 1995). Different factors influence purchasing behavior such as social, personal, cultural, psychological, and economic factors, whereas each type of these factors can be divided

into sub-factors (Kotler and Armstrong, 2012; Schiffman and Kanuk, 2007; Noel, 2009; Khan, 2007; Ramya and Ali, 2016). Kotler (2001) examined the effects of the demographic factors on consumer behavior and found that many factors such as income, age, occupation, gender, race, level of education, religious, social class, family size, and nationality could influence consumers' buying behavior. Models of consumer behavior related to food products has been discussed and developed over the years. Pilgrim (1957) stated that food perception includes three factors as psychological effects, sensory attributes, and environmental effects. Steenkamp (1997) developed a model for consumer food behavior and determined four stages for decision process as need recognition search for information, evaluation of alternatives, and choice of a food product. Askegaard (1995) pointed out that food culture varies from micro-family level to macro-country, region, religion, and occupation levels.

Even though consumer behavior includes all the goods and services, in our study we deal with only food products. A few studies were conducted on consumer behavior with respect to agricultural and food products (Engel et al., 1995; Pilgrim, 1957; Steenkamp, 1997; Dibsdall et al., 2003). According to FAO (2009), food is divided into more than fourteen categories. In the current study, we identified five unprocessed food categories. Most of previous studies focused on one or two food groups. More specially, different studies were conducted to understand the factors influencing fruit and vegetables. Dibsdall et al., (2003) suggested that age, employment, gender, smoking, and marital status all affected attitudes towards access, affordability, and motivation to eat fruit and vegetables. Rekhy and McConchie (2014) studied the effect of campaign to encourage fruit and vegetables consumption and found that these campaigns success more with collaboration between industry, retail, government, and not-for-profit organizations promoting public health. Othman et al. (2012) found that attitudes, social influence, habits, and availability were important factors towards fruit and vegetables consumption. Baker and Wardle (2003) conducted a study on the factors influencing fruit and vegetables consumption and confirmed the differences in the fruit and vegetables consumption based on gender. While, Cox et al. (1998) reported that consumers could increase their fruit and vegetables consumption, but this was only weakly associated with intention to do. Balasubramaniyam (2015) found that there was heterogeneity among different ethnic groups in Ontario (Canada) on fruit

and vegetables consumption and, duration and type of residence had significant impact on few food categories.

Determinants of household food expenditures are still essential in most of studies on consumer purchasing behaviour. In studies in Turkey, household size, and composition, education, age and gender of household head, in addition to, seasonal and regional differences were found important determinants for food expenditure (Akabay et al., 2007). Moreover, food consumption patterns will change considerably as long as educational level and welfare increase. Bilgic and Yen (2013) investigated food expenditure and its determinants. In which they found that age influences food expenditure positively, better educated household demands more protein (meat products) and married consumers demand more dairy products. Jacobson et al. (2010) suggested that there is a significant relationship between household income, household size, and age regarding food expenditure. Venn et al. (2018) identified the determinants of food expenditure and found that the income has higher impact on food expenditure than education. Ball et al. (2006) found also that education level significantly and positively influences vegetables and fruit intake.

In the studies on the immigrants, the immigrants have different desires, ways of buying and products preferences. Therefore, understanding food consumption behavior of immigrants has become one of the potential issues in marketing fields. This is due to the increase in the number of immigrants in the world. Osei-Kwasi et al. (2016) investigated the factors influencing food consumption behaviour of ethnic group in Europe and found that social and cultural environment, food beliefs and perceptions, psychosocial, social and material resources, accessibility of food, migration context, and the body play an important role in food consumption behaviour. Aljarodi (2018) revealed that immigrants tend to balance the maintenance of their traditional habits and the variables of household income, level of education, job of parents, and age of children have positive impacts on consumption. Mbombo-Dweba et al. (2017) stated that traditional food has very prominently in the dietary patterns of sub-Saharan immigrants in South Africa.

3.3. Consumer Acculturation

The level of adjustments to a new lifestyle and culture is not constant among immigrants or refugees. Therefore, some of immigrants change their culture and accept the new culture and others face difficulties in acculturation. Culture of immigrants

plays an important role in consumers' behavior. Krisjanti (2012) suggested that immigrants tend to change their behavior and adapt to new culture in the host country. Consumer behaviour of immigrants is different from consumer behaviour of the original people due to cultural differences (Tien, 2002). Culture is considered one of the most significant factors influencing consumers' behaviours, attitudes, and patterns. In addition, social and economic factors affect immigrant's food consumption behaviour (Săseanu et al., 2011). Most immigrants coming to new societies face challenges with regard to food consumption. Indeed, after immigration process, the consumption patterns of immigrants could change this process and this is called as acculturation, which defined as process of change in consumption occurs over time (Segev et al., 2013).

The phenomenon of acculturation is considered an important concept in the studies of consumer behaviour. Acculturation has an impact on consumer behaviour. There have been many studies on consumer acculturation (Berry, 1980; Penaloza, 1994; Ownbey and Horridge, 1997; Steenkamp, 2001; Sam and Berry, 2010; Vijaygopal, 2010; Kizgin, 2015; Watchravesringkan, 2010; Mbombo-Dweba et al., 2017; Firat et al., 2013). Berry (2005) is considered a pioneer in acculturation studies defined acculturation as the dual process of cultural and psychological change that takes place as a result of contact among two or more cultural groups and their individual members. In other way, acculturation can be defined as the culture exchange among two or more distinct cultures. Schwartz et al. (2010) indicated to the acculturation means mixing many cultures together when more than one culture meets and interact with others. Berry (1980) studied the effects of cultural factors on buying behaviour of consumers and stated that because the cultural values, norms, and behaviour are close to the consumption patterns. Mbombo-Dweba et al., (2017) revealed that the acculturated immigrants tend to consume less healthy food patterns. When people change and enter into a new cultural environment, they may change their subjective components such as norms, values, and consumption behaviour as well as objective components and material aspects such as tools and food (Triandis et al., 1982).

Acculturation is considered as a very important factor that has effects on purchasing behaviour. Kizgin (2015) examined the effect of consumer acculturation on ethnic Turkish consumers in Netherlands. Many models were used to explain how

immigrants learn a new culture or how they use the original culture in the country. The results revealed that Turkish language and social interactions emerged as significant predictors of domestic consumer behaviour. Vijaygopal (2010) divided acculturation in the British Indian population into three categories as separation, integration, and assimilation. Three acculturation categories differ from each other in their attitudes towards brand preferences. Acculturation categories followed by demographic factors and how the relationship between the demographic factors and acculturation. The results revealed none of the demographic factors had more effect between acculturation and brand preference. Thompson (2013) pointed out that the economic and social changes may affect African immigrants' consumption behavior and acculturation. Kaynak and Kara (2002) revealed that there were various dimensions of lifestyles among Turkish consumers such as family/children, community orientation, health consciousness, independence and adventurism. Swaidan et al. (2006) examined the role of acculturation towards ethics of consumers and found that consumers who want to keep their original culture were less tolerant while those who prefer the host culture were more tolerant with regard to consumer activities. Durmaz et al. (2011) investigated the cultural factors influencing consumer buying behaviour in Turkey and found that 44.65% of respondents consider culture and tradition are the most important criteria in buying goods and services. Kizgin et al. (2018) examined the impact of acculturation attitudes on consumption of products from heritage and host cultures and found that acculturation of the heritage culture positively influences the consumption of the heritage culture's food products.

3.4. The Factors Influencing Point of Sale Choice

There have been many studies conducted on the factors influencing point of purchase choice (Martinue 1958; Hsu and Chang, 2002; Capps and Griffin, 1998; Terano et al., 2015; Hoek et al., 2017; Prasad and Reddy, 2007; Prasad and Aryasri, 2011; Uusitalo, 2001; Sharma and Lowalekar, 2015; Carpenter and Moore, 2006; Pan and Zinkhan, 2006; Wel et al., 2012; Souček and Turčinkova, 2015; Thuong, 2016; Theodoridis and Chatzipanagiotou, 2009; Berdegué et al., 2005; Fox et al., 2004). Various outlets offer different choices to consumers in terms of choosing point of sale to buy food products. The changes in consumer variables or behaviour such as interest, values, motives, and opinions contributed to the growth of retail formats and varieties of sale points (Prasad and Reddy, 2007; Kumar, 2012).

3.4.1. Store Attributes

Some studies focused on the effect of store attributes on store choice, while others focused on the effect of consumer profile and its effects on store choice. Moreover, few studies comprised the two types and included store and consumer attributes. Martinue (1958) divided the factors into functional and psychological factors and stated that various factors can influence store choice. Mazursky (1986) examined different set of objective cues to assess and infer store images and found brand name as the most influential factor in forming quality of product. Shih et al. (2015) found that there is positive relationship between direct impact for consumer buying behaviour and consumer satisfaction in beverage industry.

Various products were tested to understand consumer behavior with regards to type of food products. Becker et al. (2000) determined that the country of origin and the place of purchase attributes influence the quality selection for beef meat in Germany. Few studies have examined the determinants of consumer choice in both modern and traditional food retail formats. Hsu and Chang (2002) examined shopper buying behaviour for fresh meat across the traditional and modern supermarkets and found that the shoppers shift from traditional to modern supermarkets due to meat safety issues. Pan and Zinkhan (2006) applied meta-analysis to explore the factors influencing retail patronage and found that service, product selection, and quality are strongly related to shoppers' retail patronage. Some studies (Theodoridis and Chatzipanagiotou, 2009; Thuong, 2016) have examined the effect of store attributes on consumer satisfaction and found that personnel, pricing, product, and convenience attributes seem to be significant factors on customer satisfaction.

Some studies have been conducted to investigate the changes in buying behavior in retail sector. There have been huge changes in consumer shopping behavior in retail markets on various dimensions such as purchase decision making, money spending, preference, and loyalty (Kumar, 2012). Mondal et al. (2017) revealed that consumer profile such as education and longevity, price and image are significant factors on purchasing.

The relationship between store attributes and sale of point choice is studies in various studies. Fox et al. (2004) studied the link between household behavior and retail format. The existence of many formats of retail stores in Malaysia explains the varieties of services provided to fresh fruit consumers. Hence, many attributes used to

satisfy and fulfil fresh fruit consumers (Gindi et al., 2016). Baker and Parasuraman (1994) concluded that consumers use ambient and social factors to assess of store quality. Baltas and Papastathopoulou (2003) revealed product as an essential criterion to choose store. Some researches show that the store attributes such as store location, facilities, product consciousness, convenience, variety, quality, and services offered are influential factors on store choice (Gindi et al., 2016; Wel et al., 2012;). There are various factors that influence store choice such as promotion and convenient branded solutions influence store patronage, location is significant factor of store loyalty and promotion, location, and store image are significant on store of satisfaction (Jere et al., 2014). Brand name of product and private label brand play important role in making perception and is considered effective factor motivates of consumers towards food products (Sathya, 2015). Many factors are essential to choose supermarkets such as price, availability of many types, and freshness of products (Durmaz et al., 2011; 2015; Thuong, 2016).

3.4.2. Consumer Characteristics

Store choice is also influenced by consumer characteristics such as gender, age, education level, level of income, job status, marital status, and others. Understanding consumer needs, desires, and factors that influence to choose retail stores has become very important in current competitive markets (Zulqarnain et al., 2015). Market segmentation according to consumer characteristics seems to be essential to choose store choice. Age as a socio-demographic factor influence store choice in fresh meat products (Terano et al. 2015; Soucek and Turcinkova, 2015; Batt and Chamhuri, 2013; Bjkovska et al., 2013), Ohen et al. (2014) found that level of income has an influence on store choice for fruit and vegetables.

Carpenter and Moore (2006) compared consumer behavior across five store formats and found that low income and education levels make people shop in the supercenter format and income seems to be significant predictor of patronage where respondents with high income tend to buy from specialty grocery stores. Gehrt and Yan (2004) examined the association between store preference and individual demographics and found income as related with retail attribute importance.

3.4.3. Consumer Preferences

Store attributes and consumer characteristics play important role through choosing food store. Choosing points of sale through buying fresh vegetables and fruit

varies according to level of income. A few studies have been conducted to understand consumer preferences of fruit and vegetables. Different attributes of purchase points could influence consumers' choice with regard to fresh vegetables and fruit. Cleanliness and picking products are considered as the most effective attributes to choose for the stores of fresh vegetables and fruits (Dal et al., 2018).

Doğan et al. (2014) examined point of sale choice among consumers for fruit and vegetables and found that consumers with low income prefer to buy from greengroceries and local markets, while consumers with high income prefer to buy from supermarkets. Akpınar et al. (2009) showed that consumers with high level of income, education, and age groups below 35 years prefer super-hypermarkets in purchasing vegetables and fruit products. Various attributes such as credit card usage, cleanness -hygiene, car parking and opportunity to make collective purchasing are the factors that influence tendency of households to purchase across different sale points. Carpenter and Moore (2006) examined consumer store preferences and reported that households with high size and female respondents prefer supercenters, whereas consumers with high income and education levels prefer warehouse formats. Wel et al. (2012) indicated that the selection of store depends on foods purchased by consumers.

3.5. Food Security

The concept of food security originated in 1970 during the global food crises. Food security focused on ensuring food availability and the price stability of basic foods (Berry et al., 2015). According to (UN) (1975), food security refers to the availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices. In 1980, food security concept was considered important mainstay in development process and in 1990, it continued to grow after the crises in Africa (Maxwell and Smith, 1992). Food security is measured to reduce of hungers and assure all people have enough to eat (Bickel et al., 2000).

The literature review noticed that the majority of food security studies were concentrated in the developing countries hosting refugees. These studies show that there was relationship between prevalence of food security and household variables. Smith et al. (2017) assessed food insecurity in Latin America using FAO's scale and stated that women and older people were more likely to have food insecurity

experience. Ramakrishna and Demeke (2002) assessed food insecurity in Ethiopia using household data and found that cereal production, education level increase in fertilizer application influenced positively food security, while the family size influenced food insecurity negatively. In Nigerian, Ahungwa et al. (2013) examined the level of food security in Nigeria and found 63.33% of individual as food insecure and the socio-economic factors such as income, employment status and participation in the Food Stamp Program as influential factors. In the same country, Ajani et al. (2006) identified that the prevalence of food security among teacher households was 26% and, the variables of income and education levels have an influence on the food security. Vilar-Compte et al. (2017) studied food insecurity among older adults and found age, gender, health status, and income as effective factors on food security. Vilar-Compte et al. (2017) stated that food security governance can be improved by identification of useful food insecurity (FI) indicators for policy makers.

Different studies were conducted to measure food security of refugees in hosting countries. Dharod et al. (2013) examined the association between food insecurity and dietary intake among Somali refugees in USA. The findings suggested that food insecure among the refugees consumed fruit and vegetables less and intake of meat and eggs was higher. Dharod et al. (2013) conducted similar study with Somali refugees in USA concluded that 72% of them were food insecure and their fruit and vegetables intakes were low. Mbombo-Dweba et al. (2017) suggested that high prices and unavailability of traditional ingredients could also make immigrants vulnerable to food insecurity. Omidvar et al. (2013) measured the correlation between food insecurity and socio-demographic factors among Afghan immigrants in Iran and indicated that food insecurity was prevalent in the householder who is female, low educated, illegal residential status, unemployed, and low socioeconomic status. Hadley et al. (2007) examined associations between child hunger and measures of socioeconomic status of Liberian refugees in USA and reported that 85% of recently arrived refugees were food insecure, whereas 42% experienced child hunger. In addition, food insecure was more likely to be households with lower income and education.

Expenditure on food (food security index) is also considered a method to measure the food security status. Households were grouped using food security status into food secure and food insecure. Iorlamen et al. (2014) assessed the food security

level in Nigeria found that the household who spent monthly at least US \$ 93.5 is categorized as a food secure, while the household who spent less money is categorized as a food insecure. Ifeoma and Agwa (2014) assessed the food security status of farmer households in the rural areas of Nigeria. The households whose per capita food expenditure was less than N 2,694.95 were considered as food insecure and vice versa. The findings show that education level, household size, and access to credit have significant effects on food security. Titus and Adetokunbo (2007) assessed food security situation among Nigerian urban households using food security index and found that household whose per capita food expenditure equals or greater than N 7,967.19 was classified as food secure household and suggested that food security could be increased by increase education level of urban households.

4. MATERIALS AND METHODS

4.1. Introduction

This chapter discusses the materials and methods used in this research. The purpose of this chapter was to provide overview of materials and methods to obtain the research objectives. The methods of this research were developed based on literature review. The methods include the descriptions of the respondents, linear multiple regression, the attitudes towards homeland and Turkish products, determinants of consumers' attitudes towards different point of purchase and food security.

This chapter was organized under sub-sections. These sub-sections are as follows: introducing study area, research design, ethical consideration, development of questionnaire, pre-testing of questionnaire, sampling, data collection, its processing, and analysis of data including descriptive analysis, chi-square, independent t-test, ANOVA, factor analysis, linear multiple regression analysis, and food security scale.

4.2. Material

4.2.1. The Study Area

The study area was purposively chosen as Samsun province in Turkey. Samsun is one of 81 provinces and located on the northern part of Turkey. The research area includes the urban centres of Atakum, Ilkadim and Canik districts of Samsun province (Figure 4.1). Samsun province was selected as a case study because it is one of the places where Arap refugees commonly live in. Syrian and Iraqi refugees speak Arabic language. There was not study interested on refugees such as purchasing behaviour. The refugee crisis started in 2011 after conflict in Syria and Iraq. Syrian and Iraqi refugee households consisted of research population to determine sample households. Iraqi refugees are in the majority, while Syrians are the minority in Samsun province. Some Syrian and Iraqi have residence permit, while other have refugee residence.



Figure 4. 1. Map of the study area in Samsun province, Turkey (Wikipedia, 2021)

4.2.2. Research Design

This study aims to investigate food purchasing behaviour by investigating the factors influencing food expenditure, point of purchase choice, and food security status of Syrian and Iraqi refugees in Samsun province of Turkey. To obtain answers to study questions, the research design should be identified. Research design is to plan structure and strategy of investigation so conceived as to obtain answers to research questions or problems. Both appropriate quantitative and qualitative research designs were used in this study. The qualitative approach is used to understand consumer behaviour, whereas quantitative approach is used to do statistical analysis and to measure consumer behaviour.

4.2.3. Development of Conceptual Models

The current study aimed to understand purchasing behaviour of refugees in Samsun province. Purchasing behaviour includes different sub-field such as amount of expenditure, consumer attitudes, and consumer selection on product or store (Kotler et al., 2017). Therefore, the researcher developed conceptual framework based on previous studies in similar fields mentioned above. Three models were developed for this study.

The first model investigates food expenditure per household. Food expenditure is influenced by different groups of variables. This model included the most influential

variables on food expenditure such as socio-demographic, economic, and behavioural variables (Figure 4.2).

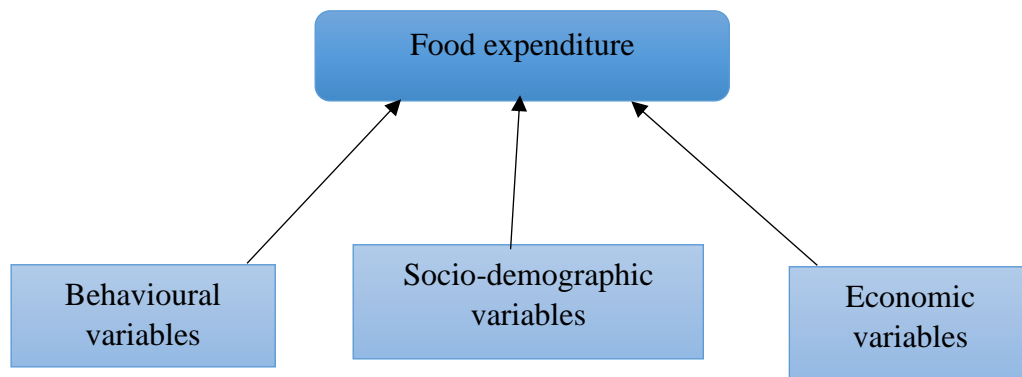


Figure 4. 2. Conceptual framework of food expenditure

Second model investigates consumers’ attitudes towards the point of store choice. Consumers’ attitudes were examined to determine the factors that drive them into store choice. The store choice of consumers is influenced by food categories, store attributes, and consumer characteristics (Figure 4.3).

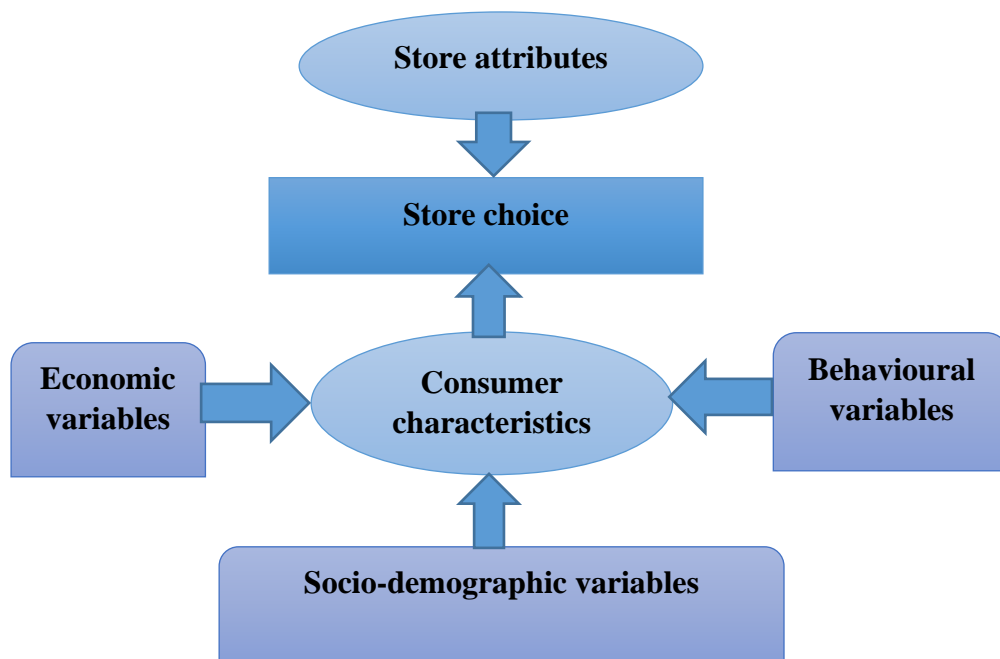


Figure 4. 3. Conceptual framework of store choice

The third model aims to explore the factors influencing food security of refugee households. Food security includes three domains: insufficient quality domain, insufficient quantity and uncertainty domain. Food security of households is influenced by socio-demographic and economic variables of households (Figure 4.4).

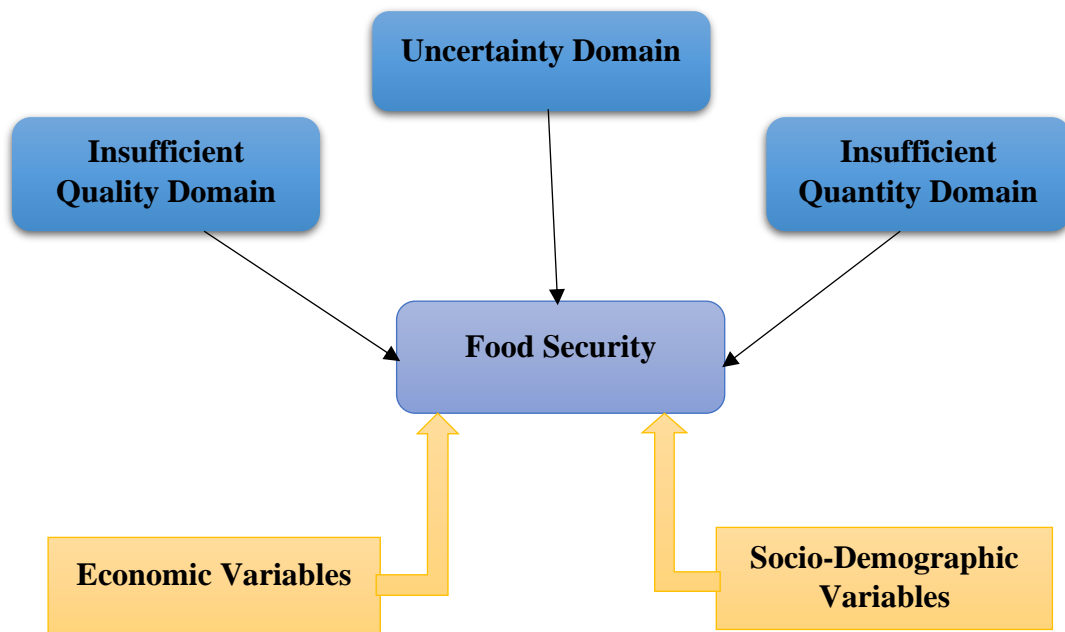


Figure 4. 4. Conceptual framework of food security

4.2.4. Ethical Considerations

Ethical considerations are applied in all researches that are related to human subjects. Ethical considerations aim to minimise the negative effects that may be on participants in the study (Zikmund et al., 2013). To ensure ethical considerations, the researcher applied to the Human Research Ethics Committee of Ondokuz Mayıs University to get approval.

Firstly, the researcher explained the participants, the aim of research and scope of questionnaire. The researcher paid attention that the consent of respondents should be voluntary, uncoerced and without any kind of pressure. Some participants wanted incentives to join to the study, but the researcher kindly rejected providing any kind of incentives to participants considering that would be unethical. Also, some of the respondents rejected to response some questions in the questionnaire because of they considered these questions are sensitive. Thus, the questions on income or saving were considered invasion of privacy by some. Therefore, these questions were not asked and the researcher was careful to these sensitive questions.

Secondly, the researcher tried to avoid bias in the study or the findings. It is unethical to hide some findings or to highlight others. The researcher avoided these

unethical considerations. In addition, the methodology of the study was chosen based on literature review and it is appropriate to detect the research objectives.

Finally, the raw data of the study and filled questionnaires will be kept safe and not be shared with anyone. The results of the research will be only mentioned.

4.2.5. Sampling

Sampling is the process of selecting a sample from the population to become the basis for estimating or predicting (Kumar, 2009). Level of accuracy is an important determinant of sample size. The larger sample size has the more accurate estimates. There were not accurate estimates of refugees' numbers in Samsun province due to several reasons such as: some of refugees register as a refugee and after that they come back to their countries. Others were living out of Samsun city. Finally, the immigrants were transforming their refugee residence into legal residence. Generally, there are 2000 Syrian and Iraqi households living in Samsun province (Immigration Administration of Samsun Governorship, 2018). The refugee population can be divided into three categories: Firstly, who have registered in Samsun province but they either live in other provinces or came back to their countries (400 households). Secondly, refugees who are living in Samsun province (700 households) but they have another residence such as: tourism, work, and estate residences. Finally: the remained refugees who were included in our study where their number approximately 680 households.

Before calculating a sample size, it is needed to determine some parameters about target population. The parameters of sampling are given below:

- Population size: Generally, according to immigration administration in Samsun there has been about 10000 persons from Syria and Iraq. Our study does not target all household numbers but, it targets the individual who was representative for food purchasing process. The average of household size was 5 individuals therefore the population size represents 680 households
- Confidence level: The most common confidence levels in social are 90% and 95%. In this study, the confidence level of 95% was used.
- Degree of variability: d refers to the distribution of attributes in the population. The more heterogeneous population, the larger sample size required to obtain a given level of precision. The more homogeneous population, the smaller sample size. Therefore, proportion 0.5% was degree of variability in this study.

There were no official data clearing the number of refugees in each district. Therefore, the stratified sampling formula could not be used in the current study. As a result, the sample size was calculated using the above criteria and the following equation (Tejada and Punzalan, 2012):

$$n = \frac{N}{1 + Ne^2} \quad (4.1)$$

Where n = sample size

N = 680

Z = 1.96 for the confidence level 95%

e = 0.05 acceptance level of sampling error

$$\text{Sample size} = \frac{680}{1 + 680(0.05)^2} \approx 252$$

The sample size was found as 252 refugee households. These sample refugee households were randomly selected from the population. Table 4.1 shows the distribution of the sample size among nationalities and districts.

Table 4. 1. Distribution of sample size among nationality and district

| Nationality | District | | | Total |
|-------------|----------|---------|-------|-------|
| | Atakum | Ilkadim | Canik | |
| Syrian | 69 | 19 | 25 | 113 |
| Iraqi | 85 | 33 | 21 | 139 |
| Total | 154 | 52 | 46 | 252 |

4.2.6. Development of Questionnaire and Semi-Structured Interview

Two types of data were used in the current study. The primary data were collected by researcher using questionnaire and semi structured interview. Secondary data collected already by other researchers and institutions for general objectives were also used. Questionnaire is defined as an instrument to collect the primary data which is designed by the researcher based on literature review. This stage starts with designing of questionnaire after that doing pre-testing the questionnaire. The researcher designs the questionnaire according to the objectives of study by reviewing literature on food purchasing behaviour.

Arabic is the mother language for Iraqi and Syrian refugees so the questionnaire and semi structured interview in this study were conducted by Arabic language. After collection required data, the questionnaire and interview were translated into English language. The questionnaire was divided into five sections: (i) socio- demographic, economic, behavioural, and cultural variables of the respondents, (ii) food expenditure on five food categories, (iii) attitudes towards homeland and domestic food products, (iv) store attributes and (v) measurements of food security status.

Section one consists of questions on the profile of respondents such as socio-demographic, economic, behavioural, and cultural characteristics.

Section two consists of questions on the weekly food expenditure of the refugee households (Venn et al., 2018).

Section three represents the questions of influencing factors for the refugee households' points of purchase choice. These questions are related with store attributes such product, price, place and facilities, health products, habits, and culture and staff characteristics (Pan and Zinkhan, 2006; Theodoridis and Chatzipanagiotou, 2009).

Section four consists of questions about consumers' preferences on eleven attributes as price, product freshness, product variety, product quality, location, desired amount, health product, buying habits, discount, store ownership, and cleaning.

Section five contains the questions on food security status of refugee households to estimate food security scale using FAO scale (Smith et al., 2017).

4.2.7. Pre-testing of the Questionnaire

It is very important to test the structured questionnaire before collection primary data. Pre-testing is a research procedure applied to examine whether each question is understandable by the respondents. Many researchers ensure that data collection should never begin before doing pre-testing of the questionnaire. Kumar (2009) stated also that pre-testing identifies possible problems that respondents may face through understanding and interpreting questions. Every respondent may interpret questions differently, so the aim of this procedure is to examine and clarify the whole questions for all respondents. Therefore, the researchers try to investigate if there are problems or misunderstanding in the questions.

The researcher has distributed the questionnaire among different respondents then some notes and revisions that came back from the respondents and some modifications have been done on questionnaire to improve wording and quality of questionnaire. After pre-testing and revisions, the questionnaire has become clear, consistent, and understandable.

4.2.8. Data Collection

In this stage, after determining the sample size and revising the questionnaire, primary data of the research were collected. The primary data were collected by the researcher during the period of October 2019- February 2020. It was expected that two months are enough to collect the primary data. However, because the nature of the study, the researcher could finish the data collection in five months. Two or three questionnaires were done per day. Face to face, semi structured interview and structured questionnaire were the main sources for primary data collection. Structured interview was used for the primary data collection where the researcher will ask a set of predetermined questions using the same wording and order in the interview schedule. The answers were recorded by researcher. This method could save time for researcher and refugees. Structured interview was chosen in our study because some of refugees who do not know reading and writing. Also, this method enables the researcher to explain unclear questions to the participants. The use of questionnaire in data collection offers greater anonymity as there is no face-to-face interaction between respondents and researcher. The interview and questionnaire were conducted in the refugees' mother language (Arabic). The interviews were conducted in the refugees' houses. Per interview took about one hour and the appointments of visit was planned to be on holidays.

4.2.9. Preliminary Examination of the Data

Preliminary examination of data precedes the stage of data analysis. It prepares the collected data for the main analysis. This process includes cleaning the data, missing the data, and response rate.

Cleaning the data, the aim of this step was to ensure that the data is clean and free from inconsistencies and incompleteness. The problems in the data cleanness can be solved by checking their contents and responses. Correcting the error in the data file is very important (Kumar, 2009). The researcher corrected some errors related to responses such as Likert scale. The researcher noted that some responses (45) took

wrong value, whereas as the maximum value in Likert scale is five. In the age column, there were errors such as some responses were under 18 old, whereas the minimum level of age in the study was 18 years. This process was ended when there were not values out of predetermined range.

Missing data or missing observations should be examined and solved. If our data have significant amounts of missing data, the results of study will be not accurate and or may be distorted. There were some missing data for some variables. As long as missing value does not exceed 10%, the results will be accurate (Tabachnick and Fidel, 2007). In our research, the missing data was not bigger than 5% of the total variables.

We have depended on the formula to compute the sample size. The sample size in our study was 252 respondents. All of them are Syrian and Iraqi people. Despite of some refugees were from other countries, but our study included only Syrian and Iraqi refugees. Syria and Iraqi refugees were asked to participate in the questionnaire. Many refugees rejected the request and the researcher could collect 252 questionnaires through 5 months. Understanding the meaning of survey, no time and unwillingness among the refugee householders to do questionnaire were the main reasons for rejection. About 50 questionnaires were uncompleted because of personal reasons and 252 refugee householders participated and completed all questions in the questionnaire. As a result, 252 questionnaires have been completed and the response rate is 100%. However, some of the respondents considered the demographic and social questions are sensitive, therefore they rejected to response.

4.2.10. Definition of Variables

Variable is defined as a concept takes different measurable values. In this research, the relationships or correlations that among the variables were investigated. Two types of variables as dependent and independent were used in this study. The independent variables have effect or impact on dependent variable. The dependent variables are responsible for change in situation or phenomenon. The dependent and independent variables were briefly described below.

4.2.10.1. Dependent Variables

In this study, the dependent variables as (i) food expenditure, (ii) origin of product (iii) store choice and (iiii) food security were modelled.

Food expenditure as the first dependent variable was measured by the weekly food expenditure of refugee households. The foods were categorized under five categories such as (i) vegetables, (ii) fruits, (iii) cereals, (iv) dairy products and (v) meat products.

Preference origin of products as the second dependent variable included Turkish and Arab products.

Store choice as the third dependent variable included the points of food choice as (i) market, (ii) supermarket, (iii) greengrocery and (iv) local market.

Food security as the fourth dependent variable was measured by indexing three domains of food security.

4.2.10.2. Independent Variables

The independent variables used in this study were divided into four categories as (i) socio-demographic, (ii) economic and, (iii) behavioral, and (iv) cultural variables (Figure 4.5).

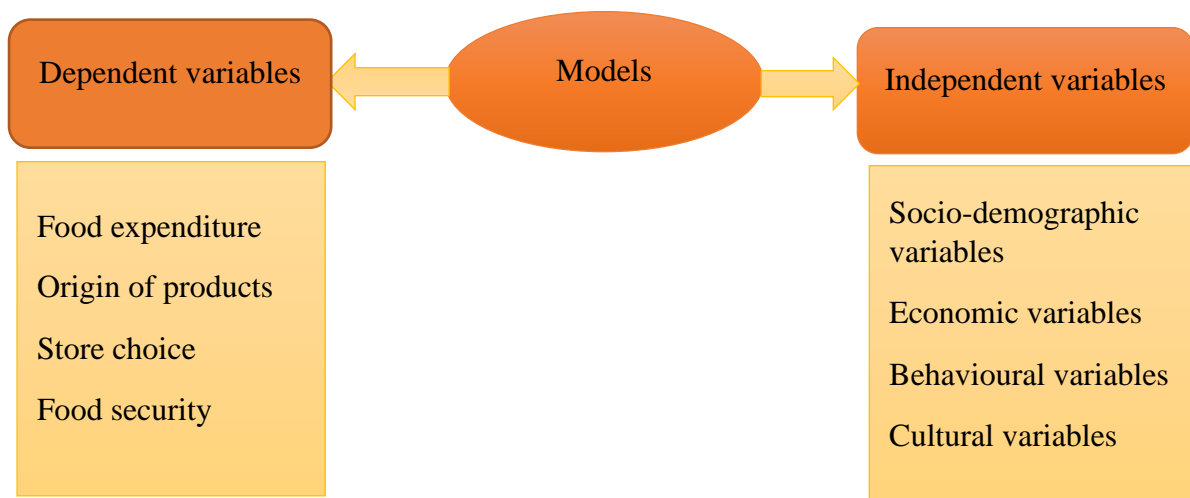


Figure 4. 5. The factors used in the current study

4.3. Limitations of the Study

This study is conducted only in three urban districts of Samsun province of Turkey. From the geographic side, Samsun province is divided into three municipalities so this study is delimited to three municipalities of Atakum, Ilkadim and Canik. These three municipalities were selected because the majority of refugees

have lived over there. Different factors have an effect on food buying behaviours of the refugee households, but in this research, the researcher has focused on socio-demographic, economic and behavioural factors rather than other factors. The second limitation of this study is about data collection. Most of Syrian and Iraqi refugees are working in different sectors so they did not have a time to conduct questionnaire and interview. Only the refugees above 18 years and who are responsible for food purchase were included in this study. It is expected that responses may be limited due to time constraint. In addition to their jobs, Syrian and Iraqi were not willing to give information about their works due to security concern with the public institutions. The third limitation of this study was the nature of questions in the questionnaire. Some questions about food expenditure, food quantities purchased and selected store were considered as embarrassing questions for the refugees.

4.4. Method

4.4.1. Measures

4.4.1.1. Measurement Scales

This study, aimed to examine the food purchasing behaviour of refugee households in Samsun province of Turkey. To get the objectives of study, the scale should be developed or used to measure consumers' buying behaviours towards food spending, origin of products, point of store choice, and food security. Two scales were used in this study to classify individuals or to determine their responses. The scales were briefly described below.

- The nominal scale enables the researcher to classify the consumers or their responses into sub-group based on their characteristics. This scale was used to classify many variables such as gender, marital status, types of residence, and other variables.
- The ordinal scale ranks responses in certain order and it was used to classify the consumers or their responses into sub-group based on their characteristics. This scale is used to classify many variables such as income level, educational level, and many other scales.

4.4.1.2. Attitudinal Scales

The researcher wanted to find out attitudes of Syrian and Iraqi immigrants towards point of purchase and origin of food products. For measuring attitudes of consumers towards food products and sale points depending on many factors, the five

Likert scale was conducted to measure weight of responses. Likert scale supposes that each response or item has the same value or weight in question. Using of Likert scale with ten, seven, five, and three points this depends on how researcher wants to measure consumers' attitudes (Kumar, 2009). More points of Likert scale may confuse respondent especially who do not know reading or writing. As a result, 5 Likert Scale is used by researcher to measure consumers' attitudes towards points of store choose and origin of product. Three Likert scale is not suitable for our research, because it may restrict respondents' answers. Seven or nine Likert scales may confuse respondents and may get inaccurate responses. Therefore, five Likert scale was chosen to this research. Five Likert scale starts with strongly disagree with the lowest score (1) and ends with strongly agree with the highest score (5) (Table 4.2).

Table 4. 2. Five Likert scale

| Response to the statement | Code of statement |
|---------------------------|-------------------|
| Strongly agree | 5 |
| Agree | 4 |
| Uncertain | 3 |
| Disagree | 2 |
| Strongly disagree | 1 |

4.4.1.3. Number of Items

We identified the main variables in Table 4.3. The independent variables were identified as group variables. Each group variable comprised several sub-variables. Table 4.3 distinguishes each group variable by number of items.

Table 4. 3. Variable groups and number of sub-variables

| Variable | Sub-variables |
|-----------------------------|---------------|
| Socio-demographic variables | 8 |
| Economic variables | 4 |
| Behavioral variables | 5 |
| Cultural variables | 15 |
| Store attributes | 28 |
| Store preferences | 11 |
| Food security status | 9 |

4.4.2. Reliability

Reliability refers to the degree of consistency and stability in an instrument. Therefore, the greater degree of consistency and stability has the greater reliability. In addition, reliability means the degree of accuracy of the measurements used in the study instrument. The measurement used must be reliable. Therefore, measurement scale and test are reliable when we get the same results after repeating measurements under constant conditions. As the degree of error is low, the degree of reliability in a study instrument is high (Kumar, 2009). If we have more than two sub-scales or when the factors influencing are divided into more than two factors, reliability test should be measured for the individual sub-scales (Nunnally and Bernstein, 1994).

There are many methods of determining the reliability of an instrument such as test/retest and parallel forms of the same test. To measure the level of reliability in this study, Cronbach alpha coefficient was used. This tool was used as it is the most common test for measuring the reliability of the research instrument. The researcher examines the degree of reliability depending on Cronbach alpha coefficient values. Cronbach alpha coefficient values range from zero to 1. The value less than 0.6 is considered unacceptable reliability, the value above 0.6 are acceptable reliability and the value more than 0.7 is excellent reliability (Hair et al., 2014).

4.4.3. Data Analysis

4.4.3.1. Data Analysis Process

Collected data should be edited and coded to get ready for analysis. After data collection, two steps should be followed. Before data analysis, this raw data should be ensured cleanness and free from incompleteness and mistakes. This step is called editing. After editing, the data should be coded. Whereas the researcher coded each variable based on the type of variable such as nominal, ordinal, and altitudinal variable. After performing these procedures, the data are ready to analysis. The data were entered into the computer by using software programs such as EXCEL as a first step. After data were entered into EXCEL program, Statistical Packages for Social Sciences (SPSS) 25 version was used by the researcher to analysis the data.

4.4.3.2. Data Analysis Techniques

In this stage of the study, the data were collected, edited, coded and became ready to be analyzed. This step is essential to get the findings of the study. Different

techniques were applied to determine the objectives of study. These techniques are explained as follows.

4.4.3.3. Descriptive Analysis

Descriptive analysis is numerical and graphical way to describe, summarize, and display data (Beintema and Casper, 2018). In some cases, graphical way may be more effective to describe or present data than numerical way. Different descriptive measures such as frequency distributions, graphs, mean, median, standard deviation, minimum and maximum, values of respondents were used in this study.

4.4.3.4. Linear Multiple Regression Analysis

Linear multiple regression (LMR) analysis is statistical technique for understanding the impact of independent variables on dependent variable(s). This technique was carried out to estimate the relationship between dependent variable and independent variables. The first stage is to divide the variables into dependent variable(s) and independent variables (Hair et al., 2014). One dependent variable (Y) and one or more independent variables as a set of explanatory variables ($X_1, X_2 \dots X_p$) were selected to investigate the relationship between food expenditure of refugees and a set of variables such as socio-demographic variables, economic variables and behavioral variables using the multiple linear regression analysis in this study. Food expenditure of refugees represents their total expenditure for vegetables, fruits, dairy, meat and cereals products. To estimate the food expenditure function of the refugee households, the following regression equation was used.

$$ExpSharefi = \beta + \alpha SocDem + \theta Eco + \delta Beh + \epsilon_i \quad (4.2)$$

Where $ExpSharefi$ represents the share of five food categories expenditure on i^{th} household total income. $SocDem$ is a vector of socio-demographic variables including nationality, gender, marital status, household size, age, education level, length of stay in Samsun province and district. Eco denotes a vector of economic variables including job status, number of workers in per household, income and cash assistance providing from turkish government. Finally, Beh is a vector of behavioural variables including number of meals daily, buyer, purchasing out of season, listing through shopping, payment way and waste food. β refers to constant value. α , θ and δ represent regression coefficients for socio-demographic, economic and behavioral variables, respectively. ϵ_i denotes the error terms.

Multicollinearity test refers to the correlations among three or more independent variables. There should not be a correlation among independent variables. The regression model can be affected by correlation through these points. Multicollinearity can reduce the predictive power of independent variable by the extent to which this variable is associated with other independent variables. As long as multicollinearity increases the explained variance by each independent variable decreases. Multicollinearity maximizes the prediction from independent variables included in model (Hair et al., 2014).

4.4.3.5. Independent Sample t-test

Independent sample t-test technique is used to compare the means of two independent samples. This technique was applied to find out if there are differences between two groups and whether these differences are statistically significant. Therefore, in order to apply this test, there should not be a relationship among two groups. In this study, based on the variables presented in the previous sections, this test was used to examine the differences among refugees in the food expenditure, origin of products, point of purchase choice and food security status.

4.4.3.6. Analysis of Variance (ANOVA)

Analysis of variance or one-way (ANOVA) technique is used to compare the means of more than two independent groups. This technique was applied to find out if there are differences among the groups and whether these differences are significant. In this study, based on the variables presented in the previous sections, the ANOVA was administered to examine the differences among refugees in the food expenditure, preference of origin of products, point of purchase choice, and food security status.

4.4.3.7. Chi-Square Test

Chi-square test was used in this study to examine the association among the variables. This test is used to know if there is significant correlation among two variables. To do this, Chi-square test for independence was used to study if there is relationship between the dependent variable(s) and the independent variables. More specifically, Chi-square test was used to examine the relationship between cultural factors and attitudes towards the origin of food products. Likewise, Chi-square test was used to examine the relationship between food security status and the group of socio-demographic and economic variables.

4.4.3.8. Factor Analysis

Explanatory factor analysis (EFA) technique was used in the study to reduce both the number of cultural factors influencing consumer attitudes towards origin of food products and the number of store attributes influencing store choice of consumers. The purpose of this procedure is to reduce 15 cultural factors and 28 store attributes factors using factor analysis (FA) technique. FA is used to reduce variables by extracting representative variables and eliminating unrepresentative variables. Sample size is important factor in the factor analysis. At least and larger 100 observations is considered to conduct this technique. In addition, the number of observations must be greater than the number of variables (Hair et al., 2014). The Kaiser-Meyer-Olkin (KMO) test is used to check whether the sample is adequate or not. If the KMO value is greater than 0.6, factorability of the correlation matrix can be assumed. This means that the data is suitable to apply factor analysis (Hair et al., 2010). Bartlett's sphericity is used as another test to check whether factor analysis procedure is available or not. If the Bartlett's sphericity test is less than 0.05, the factor analysis can be used. There are many methods for conducting factor analysis such as maximum likelihood, minimum residual, principal axis, weighted least squares, and generalized weighted least squares etc. For this study, the principal axis method was used.

Latent root criterion or eigenvalue is the most common technique in factor analysis. If latent root criterion or eigenvalue is greater than one, this means significant, whereas if they are less than one this means insignificant. Percentage of variance criterion is another criterion applied in factor analysis. This approach is based on achieving cumulative percentage of total variance extracted by successive factors. This percentage explains the variances of factors, and their eigenvalues are greater than one. The value of percentage must be more than 60% to be considered satisfactory (Hair et al, 2014).

Factor rotation or factor loadings explain the correlation of each variable and the factor. This test is conducted to measure the degree of correspondence between the variables and the factors. Factor loading clarifies the role of each variable in interpreting each factor. With high value of factor loading refers to high correspondence between the variable and the factor. The factor rotation is important tool in interpreting factors. Using unrotated solutions is considered as insufficient. Rotated solutions reduce ambiguities in the preliminary analysis and improve the

interpretation (Hair et al, 2014). Significance level of factor loading can be determined as follows. Factor loading value with the range from +/- 0.30 to +/-0.40 meets the minimal level for interpretation. Factor loading value with the range greater than +/- 0.50 is considered practically significant. Factor loadings value with the range greater than 1.7 is considered indicative of well-defined structure (Hair et al, 2014).

The significance can be identified based on sample size. In this thesis, the sample size is identified 252 respondents. With our sample of 252 respondents, factor loadings of 0.35 and above are significant.

Another approach is used to examine significant loading. This approach extracts variables that are not adequately accounted by the factor solution. This approach is called communalities of the variables. In this approach, the communality values are the basis to assess variables. The variables with communality value of greater than 0.50 have sufficient explanation. Some variables have more loading values than the others. The variables with greater loadings are more important and have greater influence on the name of factor (Hair et al, 2014).

The rotation methods are orthogonal rotation and oblique rotation. In orthogonal rotation method, the factors are uncorrelated and this method is easy to interpret, describe and report the results. The oblique rotation method is used when the factors are correlated and this method has three techniques as varimax, quartimax and, equamax (Tabachnick and Fidell, 2007).

Factor analysis in this study was applied for 15 in cultural variables and 28 store attribute variables using the principal component analysis method with a Promax rotation.

4.4.3.9. Measurement of Food Security

United states agency of international development (USAID) Food and Nutrition Technical Assistance (FANTA) project developed a scale to measure food insecurity status this scale is called Household Food Insecurity Access Scale (HFIAS). This scale was used in the current study to measure food security status of Syrian and Iraqi refugees in Samsun, Turkey. In general, HFIAS scale includes three domains and nine items totally. A simple modification has been done to the scale to comply with the food security dimensions stipulated in the FAO definition. This scale included nine questions distributing among three domains: uncertainty domain (one question),

insufficient food quality (three questions) and insufficient food quantity (five questions). Each question in the scale includes two options a score of 1 classified household into food secure and a score of 2 which refers to food insecure household. As a result, households were classified into two groups: food secure and food insecure.

5. RESULTS AND DISCUSSION

5.1. Introduction

In this study, the empirical findings of the factors influencing food expenditure, retail store choice and food security were presented and discussed in this chapter. In this chapter, the results of the study were presented by using texts, graphs and tables. This chapter presents the results of statistical analyses. This chapter consists of 6 sub-sections. It starts by introduction. Section 2 presents profile of the respondents. Section 3 illustrates the results of multiple regressions to identify food expenditure. Section 4 presents the results of acculturation effects on homeland and Turkish products. Section 5 explains the results of the refugee households' store choice and the factors influencing retail store choice. The last section presents the results of food security status of the respondents.

5.2. Profile of Respondents

5.2.1. Socio-Demographic Characteristics

Descriptive statistics for respondents' socio-demographic characteristics were given in Table 5.1. The current study used eight socio-demographic variables. The results show that 44.8% and 55.2% of the respondents were Syrian and Iraqi, respectively. The Iraqi population in Samsun is greater than Syrian population. The share of male and female respondents was 62.3% and 37.7%, respectively. While 51.2% of the respondents were married, 47.2% and 1.6% were single and divorced, respectively. The average age of the respondents was 30 years. The average size per household was 5 and households with 5-6 members presented the largest group (37.7%). With regards to educational level, the majority of respondents (47.2%) were bachelor degree graduates, 21.8% and 14.3% of the respondents completed the high school and postgraduate programs, respectively. Only 5.2% of the respondents were illiterate and formal education. The majority of the respondents (61.1%) settled in Ilkadim district (downtown), 20.6%, and 18.3% were settled in Atakum and Canik districts, respectively. About half of the respondents (47.2%) have lived in Samsun province for less than 3 years, 28.6% for 3-4 years, 22.2% for 5-6 years, and 2% for more than 6 years. The great wave of migration started after 2014.

Table 5. 1. Socio- demographic variables

| Socio-demographic variables | Sub-variables/ means | No. of respondents | Percent (%) |
|--|----------------------|--------------------|-------------|
| Nationality | Syrian | 113 | 44.8 |
| | Iraqi | 139 | 55.2 |
| Gender | Male | 157 | 62.3 |
| | Female | 95 | 37.7 |
| Marital status | Married | 129 | 51.2 |
| | Single | 119 | 47.2 |
| | Divorced | 4 | 1.6 |
| Age group (categorical) | 18 – 25 years | 100 | 39.8 |
| | 26 – 35 years | 79 | 31.5 |
| | 36 – 45 years | 44 | 17.5 |
| | More than 45 | 29 | 11.2 |
| Household size (categorical) | Less than 3 | 29 | 11.5 |
| | From 3 to 4 | 64 | 25.4 |
| | From 5 to 6 | 95 | 37.7 |
| | More than 6 | 64 | 25.4 |
| Level of education | Illiterate | 13 | 5.2 |
| | Primary | 13 | 5.2 |
| | Secondary | 16 | 6.3 |
| | High school | 55 | 21.8 |
| | University | 119 | 47.2 |
| | Postgraduate | 36 | 14.3 |
| | | | |
| District | Canik | 46 | 18.3 |
| | Ilkadim | 154 | 61.1 |
| | Atakum | 52 | 20.6 |
| Length of stay in Samsun (categorical) | Less than 3 years | 119 | 47.2 |
| | From 3 to 4 years | 72 | 28.6 |
| | From 5 to 6 years | 56 | 22.2 |
| | Above of 6 years | 5 | 2.0 |

5.2.2. Economic Variables

Table 5.2 explains economic variables of the respondents. While 38.5% of the respondents were employed, 35.7% and 25.8% of them were students and unemployed, respectively. While 51.2% of the respondents had no employee in their households, 32.9% had one worker, 13.5% had two workers and 2.4% had three workers. About 36.1% of refugee householders reported that their monthly income was above TL 3000, 29% had between TL 2000 and 3000, 18.7% had between TL 1500 and 2000 and, 16.3% was below TL 1500. The majority of respondents (84.9%) did not benefit from cash assistance, while only 15.1% of them received. In order to get cash assistance, the number of household members must be at least 5.

Table 5. 2. Economic variables

| Economic variables | Sub-variables | No. of respondents | Percent (%) |
|------------------------------|-------------------|--------------------|-------------|
| Job status | Unemployed | 65 | 25.8 |
| | Employed | 97 | 38.5 |
| | Student | 90 | 35.7 |
| Number of workers | None | 129 | 51.2 |
| | 1 worker | 83 | 32.9 |
| | 2 workers | 34 | 13.5 |
| | 3 workers | 6 | 2.4 |
| Monthly income (categorical) | Less than TL 1500 | 41 | 16.3 |
| | TL 1500 -2000 | 47 | 18.7 |
| | TL 2000-3000 | 73 | 29.0 |
| | More than TL 3000 | 91 | 36.1 |
| Cash assistance | Yes | 38 | 15.1 |
| | No | 214 | 84.9 |

5.2.3. Behavioural Variables

Behavioural variables indicate that the behaviour is followed by the householders when buys foods. The results of behavioural variables were presented in Table 5.3. Food shopping is done by father or mother in 75.8%, father and mother 7.9%, and children in 16.3% of refugee households. In a day, about half of the refugee households (43.7%) eat two meals, while the majority of them eat three (49.6%) or four meals (6.7%). The results show that the frequency of buying foods off season by the refugee households were 7.5% frequently, 27.8% occasionally, 27.8% rarely, and 16.3% very rarely. However, 19.4% of the households never did food requirement list, 21.4% occasionally, 18.3% frequently, 13.5% very rarely, 11.9% always and 8.7% rarely. 77.9% of the respondents bought foods by credit card and 22.1% by cash. Finally, 41.3% of the respondents had food waste whereas 58.7% had not food waste.

Table 5. 3. Behavioural variables

| Behavioural variables | Sub-variables | No. of respondents | Percent (%) |
|---|-------------------|--------------------|-------------|
| Responsible person from food purchases? | Father or mother | 182 | 75.8 |
| | Father and mother | 19 | 7.9 |
| | Children | 39 | 16.3 |
| Number of meals in a day | Two meals | 110 | 43.7 |
| | Three meals | 125 | 49.6 |
| | Four meals | 17 | 6.7 |

| Behavioural variables | Sub-variables | No. of respondents | Percent (%) |
|-----------------------------|---------------|--------------------|-------------|
| Purchasing off season foods | Never | 42 | 16.7 |
| | Very Rarely | 41 | 16.3 |
| | Rarely | 70 | 27.8 |
| | Occasionally | 70 | 27.8 |
| | Frequently | 19 | 7.5 |
| | Always | 0 | 0.0 |
| Doing list of food purchase | Never | 49 | 19.4 |
| | Very Rarely | 34 | 13.5 |
| | Rarely | 22 | 8.7 |
| | Occasionally | 54 | 21.4 |
| | Frequently | 46 | 18.3 |
| | Always | 30 | 11.9 |
| Type of payment | Cash | 183 | 77.9 |
| | ATM card | 52 | 22.1 |
| Food waste | Yes | 104 | 41.3 |
| | No | 148 | 58.7 |

5.3. Household Food Expenditure

Food expenditure of the households was estimated per week (Table 5.4). The results show that the average food expenditure per week by the households was 311 TL (43.5 USD) and represents 38% of the total income. The distribution of expenditure on food was as follows 28% on meat, 26% on vegetables, 18% on fruit, 14% on dairy products, and 13% on cereals. It is concluded that the most expenditure was on meat products, while the least expenditure was on cereals products.

Table 5. 4. The households' weekly food expenditure by food categories

| | Average expenditure (TL/week) | Percent (%) |
|----------------|-------------------------------|-------------|
| Vegetables | 82 | 26 |
| Fruit | 57 | 18 |
| Dairy products | 45 | 14 |
| Meat | 87 | 28 |
| Cereals | 40 | 13 |
| Total | 311 | 100.0 |

Table 5.5 shows the food expenditure differences between Syrian and Iraqi refugees for each food categories. The average weekly food expenditure was TL 296 by Syrian and TL 325 by Iraqi. There are statistically significant differences in total food expenditure of the refugee groups ($p < 0.05$). The average weekly vegetable expenditure was TL 81 by Syrian and TL 83 by Iraqi. The average weekly fruit

expenditure by Syrian and Iraqi were TL 58 and TL 56, respectively. The average weekly dairy products expenditure was TL 43 and TL 46 respectively. The average weekly meat expenditure was TL 77 by Syrian and TL 99 by Iraqi and there are statistically significant differences in their meat expenditure ($p < 0.05$). The average cereal expenditure was TL 36 by Syrian and TL 43 by Iraqi and there are statistically significant differences in their fruit expenditure ($p < 0.05$).

Table 5. 5. Food expenditure by Syrian versus Iraqi refugees

| Food categories | Syrian refugees | | Iraqi refugees | | p-value |
|-----------------|-----------------|-----------|----------------|-----------|---------|
| | Mean | Std. Err. | Mean | Std. Err. | |
| Vegetables | 81 | 3.17 | 83 | 3.03 | 0.63 |
| Fruit | 58 | 2.73 | 56 | 2.05 | 0.55 |
| Dairy products | 43 | 1.97 | 46 | 1.58 | 0.15 |
| Meat | 77 | 3.65 | 99 | 3.10 | 0.00* |
| Cereals | 36 | 1.66 | 43 | 1.36 | 0.00* |
| Total | 296 | 10.17 | 325 | 7.87 | 0.02** |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.4. Determination the Factors Influencing Food Expenditure

In this section, the relationship between the food expenditure of the refugee households and a set of variables such as socio-demographic, economic and behavioral variables was investigated. Also, multiple linear regression analysis is appropriate technique to obtain our objectives because all the variables in this model are metric.

In the model, the weekly food expenditure was used as dependent variable, while socio-demographic, economic and behavioral variables were used as independent variable.

$$ExpSharefi = \beta + \alpha SocDem_i + \theta Eco_i + \delta Beh_i + \epsilon_i \quad (5.1)$$

Where $ExpSharefi$ represents the share of five food categories expenditure on i^{th} household' total income. $SocDem_i$ is a vector of socio-demographic variables including nationality, gender, marital status, household size, age, education level, length of stay in Samsun province and district. Eco_i denotes a vector of economic variables including job status, number of workers in per household, income and cash assistance providing from turkish government. Finally, Beh_i is a vector of behavioural variables including number of meals daily, buyer, purchasing out of season, listing through shopping, payment way and waste food. β refers to constant value. α , θ and δ represent regression coefficients for socio-demographic, economic and behavioral

variables, respectively. ε_i denotes the error terms. The table 5.6 below shows the definition and description of all variables used in the model above.

Table 5. 6. Definition of variables and sample means

| Variable | Definition and Description | Mean |
|------------------------------------|---|-------------|
| Dependent variable | | |
| Food expenditure | Expenses per week on five food groups (fruit, vegetables, dairy products, meat products and cereals) (TL) | 311 |
| Dummy Independent variables | | |
| Nationality | 1, Iraqi; 0, otherwise | 0.68 |
| Gender | 1, male; 0, otherwise | 0.62 |
| Marital status | | |
| Married | 1, married; 0, otherwise (reference) | 0.51 |
| Single | 1, single; 0, otherwise | 0.47 |
| Divorced | 1, divorced; 0, otherwise | 0.02 |
| Level of education | | |
| Illiterate | 1, illiterate; 0, otherwise (reference) | 0.05 |
| Primary | 1, primary; 0, otherwise | 0.05 |
| Secondary | 1, secondary; 0, otherwise | 0.06 |
| High school | 1, high school; 0, otherwise | 0.22 |
| University | 1, graduate; 0, otherwise | 0.47 |
| Postgraduate | 1, postgraduate; 0, otherwise | 0.14 |
| District | | |
| Canik | 1, Canik; 0, otherwise (reference) | 0.18 |
| Ilkadim | 1, Ilkadim; 0, otherwise | 0.61 |
| Atakum | 1, Atakum; 0, otherwise | 0.21 |
| Job status | | |
| Unemployed | 1, unemployed; 0, otherwise (reference) | 0.26 |
| Employed | 1, employed; 0, otherwise | 0.38 |
| Student | 1, student; 0, otherwise | 0.36 |
| Cash assistance | 1, if arrive assistance; 0, otherwise | 0.15 |
| Buyer | | |
| Father or mother | 1, father or mother; 0, otherwise (reference) | 0.72 |
| Father and mother | 1, father and mother; 0, otherwise | 0.08 |
| Children | 1, children; 0, otherwise | 0.15 |
| Number of meals | | |
| Two meals | 1, two meals; 0, otherwise (reference) | 0.44 |
| Three meals | 1, three meals; 0, otherwise | 0.50 |
| Four meals | 1, four meals; 0, otherwise | 0.07 |
| Purchasing off season | | |
| Never | 1, never; 0, otherwise | 0.17 |
| Very Rarely | 1, very rarely; 0, otherwise | 0.16 |
| Rarely | 1, rarely; 0, otherwise | 0.28 |
| Occasionally | 1, occasionally; 0, otherwise | 0.28 |

| Variable | Definition and Description | Mean |
|---|--|-------------|
| Frequently | 1, frequently; 0, otherwise | 0.08 |
| Always | 1, always; 0, otherwise | 0.00 |
| Doing list for shopping | | |
| Never | 1, never; 0, otherwise (reference) | 0.19 |
| Very Rarely | 1, very rarely; 0, otherwise | 0.13 |
| Rarely | 1, rarely; 0, otherwise | 0.09 |
| Occasionally | 1, occasionally; 0, otherwise | 0.21 |
| Frequently | 1, frequently; 0, otherwise | 0.18 |
| Always | 1, always; 0, otherwise | 0.12 |
| Type of payment | 1, cash way; 0, otherwise | 0.78 |
| Continuous Independent variables | | |
| Age | Age in years | 31 |
| Household size | Number of individuals in the household | 5 |
| Lenght of stay in Samsun | Number of years satteded in Samsun | 3 |
| Workers per household | Number of workers in the household | 2 |
| Income | Monthly income (TL) | 3239 |
| Waste food | Amount of wasted food weekly (TL) | 5 |
| Sample size | | 252 |

Multicollinearity refers to the correlations among three or more independent variables. There must not be found correlation among the independent variables. Table 5.7 shows collinearity statistics among the independent variables. If variance inflation factor (VIF) is greater than 10, then there is multicollinearity and vice versa. All VIF values are less than 10 and this refers that there is no multicollinearity among the independent variables.

Table 5. 7. Multicollinearity results among the independent variables

| Model | Collinearity Statistics | |
|----------------|--------------------------------|------------|
| | Tolerance | VIF |
| (Constant) | .796 | 1.256 |
| Nationality | .799 | 1.251 |
| Gender | .360 | 2.775 |
| Single | .843 | 1.186 |
| Divorced | .435 | 2.301 |
| Age | .717 | 1.395 |
| Household size | .405 | 2.469 |
| Primary | .416 | 2.403 |
| Intermediate | .182 | 5.487 |
| High | .144 | 6.960 |
| Bachelor | .242 | 4.130 |
| Graduate | .284 | 3.519 |
| Atakum | .394 | 2.540 |
| Ilkadam | .733 | 1.364 |
| Length of stay | .507 | 1.973 |

| Model | Collinearity Statistics | |
|-------------------|-------------------------|-------|
| | Tolerance | VIF |
| Employment | .452 | 2.211 |
| Student | .626 | 1.597 |
| N. of workers | .629 | 1.589 |
| Income | .680 | 1.471 |
| Cash assistance | .842 | 1.187 |
| Father And mother | .711 | 1.406 |
| Children | .776 | 1.289 |
| Three Meals | .780 | 1.281 |
| Four Meals | .526 | 1.902 |
| Very Rarely | .410 | 2.442 |
| Rarely | .367 | 2.726 |
| Occasionally | .564 | 1.774 |
| Frequently | .562 | 1.780 |
| Very rarely list | .598 | 1.673 |
| Rarely list | .457 | 2.186 |
| Occasionally list | .472 | 2.117 |
| Frequently list | .529 | 1.889 |
| Always list | .715 | 1.399 |
| Payment Way | .787 | 1.271 |
| Waste amount | .796 | 1.256 |

a. Dependent Variable: Expenditure Weekly

Table 5.8 shows coefficient of determination stated as R square. Coefficient of determination express the quality of model. It includes three indicators. The R value equals 0.745 refers to the strenght of relationship between dependent variable (the total weekly food expenditure of the refugee households) and independents variables (socio-demographic, economic and behavioural variables). As long as this R value is greater, the stronger relationship between the dependent variables and the independent variables. The R squared indicates a variation in the total food expenditure and is explained by independent variables such as socio-demographic, economic and behavioural variables. The R squared equals 0.555 and it means that 55.5% of the variation in the total food expenditure is explained by variation in the independent socio-demographic, economic, and behavioural variables.

Table 5.8 shows ANOVA results and includes two main values as F test and its significance level. This table clarify if there is significant relationship between the dependent and independent variables. If the significance value is less than 0.05, it means that there is a significant relationship between the dependent and independent variables. F test equals 7.346 and the significance level of 0.000 is less than 0.05 and

this means that there is significant linear relationship between the dependent and independent variables.

Table 5.8 shows the results of multiple linear regression. The regression model expresses the effects of socio-demographic, economic and behavioural factors on the total food expenditure. The model results show that constant value is 43.14 and this means if all independent variables of the model are zero, the weekly food expenditure of the households equals TL 43.14. To know if there are significant effects of these independent variables on food expenditure, we evaluate their significance value. If the significance value is less than 0.01, 0.05 and 0.10, this means that independent variables have statistically significant effects on the dependent variable and vice versa.

The regression model results in Table 5.8 show that the variables of household size, income level and waste amount had statistically positive effect on the refugee households' weekly food expenditure at %1 level, while the variable of length of stay in Samsun province and listing before shopping (frequently) had a statistically positive impact on the food expenditure at 5% level. The variable of purchasing off-season (occasionally) had statistically significant positive effect on the food expenditure of the refugee households at 10%. However, the variables of nationality, gender, marital status, age, education level, district, job status, number of workers in the household, cash assistance, number of meals daily, buyer, and payment way had not a statistically significant effect on the weekly food expenditure of the refugee households.

The model results show that one-member increases in the households increases weekly food expenditure by TL 17.7. These findings were supported by Jacobson et al. (2010) and Zani et al. (2019). However, Deaton and Paxson (1998) found different result as food expenditure decreases as household size increase and Vernon (2005) stated that larger households can achieve the same level of consumption at lower expenditure. The refugee households who live for longer time in Samsun province spend TL 6.3 less than other households. The households with TL 1 higher income spend TL 0.02 for foods than the other households. These results were consistent with the results of other studies (Akbat et al., 2007; Venn et al., 2018; Kirkpatrick and Tarasuk, 2003; Ghany and Gehlken, 2002). The refugee households who buy food products off- season (occasionally) and (frequently) expend TL 31.99 and TL 47.55 expend more than other households who never buy off-season respectively. The

refugee households who waste foods spend TL 0.99 more for foods than other households who do not waste foods.

According to the findings, household size and length of stay in Samsun had statistically significant associations on food expenditure. Therefore, H1.a hypothesis, socio-demographic variables have a significant influence on food expenditure, can be partly accepted. Level of income had statistically significant associations on food expenditure. Therefore, H1. b hypothesis, as economic variables have a significant influence on food expenditure, can be partly accepted. Finally, the variables of purchasing food products off-season and food waste had statistically significant associations on food expenditure. Therefore, H1. c hypothesis, behavioural variables have a significant influence on food expenditure, can be partly accepted.

Table 5. 8. Regression results of weekly food expenditure model^a

| Independent Variables | Unstandardized Coefficients | | Standardized Coefficients | t | p-value |
|-----------------------|-----------------------------|------------|---------------------------|--------|---------|
| | B | Std. Error | Beta | | |
| (Constant) | 43.142 | 41.735 | | 1.034 | .303 |
| Nationality | -.071 | 11.509 | .000 | -.006 | .995 |
| Gender | 18.295 | 11.078 | .087 | 1.651 | .100 |
| Single | 4.314 | 16.015 | .021 | .269 | .788 |
| Divorced | 8.696 | 46.590 | .010 | .187 | .852 |
| Age | .881 | .652 | .097 | 1.350 | .178 |
| Household size | 17.726 | 2.661 | .371 | 6.660 | .000* |
| Primary | 19.644 | 34.292 | .042 | .573 | .567 |
| Intermediate | -18.993 | 32.577 | -.043 | -.583 | .561 |
| High | -5.314 | 27.108 | -.022 | -.196 | .845 |
| Bachelor | .821 | 25.365 | .004 | .032 | .974 |
| Graduate | 12.022 | 27.750 | .042 | .433 | .665 |
| Atakum | 10.369 | 18.428 | .050 | .563 | .574 |
| Ilkadim | 20.545 | 18.705 | .083 | 1.098 | .273 |
| Length of stay | -6.325 | 3.125 | -.111 | -2.024 | .044** |
| Employment | 22.892 | 13.910 | .109 | 1.646 | .101 |
| Student | 17.562 | 14.865 | .083 | 1.181 | .239 |
| N. of workers | 12.470 | 7.537 | .099 | 1.655 | .100 |
| Income | .021 | .003 | .373 | 6.273 | .000* |
| Cash assistance | -21.210 | 16.178 | -.075 | -1.311 | .191 |
| Father And mother | -3.537 | 20.203 | -.009 | -.175 | .861 |
| Children | -11.864 | 15.637 | -.042 | -.759 | .449 |
| Three Meals | 12.562 | 10.907 | .062 | 1.152 | .251 |
| Four Meals | -2.953 | 22.973 | -.007 | -.129 | .898 |

| Independent Variables | Unstandardized Coefficients | | Standardized Coefficients Beta | t | p-value |
|-----------------------|---|------------|--------------------------------|-------|---------|
| | B | Std. Error | | | |
| Very Rarely | 20.335 | 17.627 | .075 | 1.154 | .250 |
| Rarely | 21.347 | 16.703 | .094 | 1.278 | .203 |
| Occasionally | 31.993 | 17.415 | .143 | 1.837 | .068*** |
| Frequently | 47.556 | 23.469 | .127 | 2.026 | .044** |
| Very rarely list | 12.830 | 18.218 | .044 | .704 | .482 |
| Rarely list | -6.266 | 21.328 | -.018 | -.294 | .769 |
| Occasionally list | 8.965 | 16.995 | .037 | .528 | .598 |
| Frequently list | -.091 | 17.617 | .000 | -.005 | .996 |
| Always list | 7.845 | 19.785 | .026 | .397 | .692 |
| Payment Way | 9.041 | 13.689 | .037 | .660 | .510 |
| Waste amount | .941 | .356 | .140 | 2.639 | .009* |
| Model summary | R ² = 0.555, Adjusted R ² = 0.480 | | | | |
| ANOVA results | F= 7.346, Sig= 0.000 | | | | |

a. Dependent variable: Weekly food expenditure

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.5. Acculturation Attitudes of the Refugee Households

Acculturation attitudes include personal beliefs whereas acculturation behaviour includes social aspects of life such as (language, following the news etc). There are many cultural factors that can affect on consumers behaviour. In our research, three main cultural factors are used to investigate the impact of cultural factors on food buying behaviour and as consequence origin of product. These factors can be divided into culture, sub- culture and social class. Every factor can be divided into sub factors. It is from the objectives of study the refugee's attitudes towards homeland and Turkish products. Factor analysis technique was used to investigate the most important factors influencing consumers attitudes towards origin of product. The refugees were asked to express acculturation status in the Turkish society.

5.5.1. Results of the EFA for Acculturation

Table 5.9 shows the results of EFA related to acculturation. The value of Kaiser-Meyer-Olkin (KMO) equals 0.699 which exceeded the recommended value of 0.6 and, the value of Bartlett's test of sphericity was significant (p = 0.000). These results indicate that factor analysis is appropriate method for the dataset. This research has 252 respondents so factor loadings of 0.35 and above are significant. The results of factor loadings or rotation in Table 5.9 show that out of 15 variables, six factors had eigenvalues with greater than one and their cumulative value indicates that six factors

explain 66.252% of the total variance. The reliability or Cronbach's Alpha of the factors changes from 0.458 to 0.689. The values greater than 0.60 mean that they have acceptable reliability, whereas the values are less than 0.60 will be deleted (Hair et al., 2014). Therefore, the factors of F4 impact of media, F5 change in consumption and F6 food culture were deleted for the next analysis. The loading value must be greater than 0.35 to be significant. The first factor labelled as social class with Eigenvalue of 3.387 and Cronbach's alpha of 0.689 includes four variables as differences in attitudes, friend and family effect, income effect, and education level effect. The second factor labelled as sub-culture with Eigenvalue of 1.726 and Cronbach's alpha of 0.628 includes three variables as religious effect, region effect, and occupation effect. The third factor labelled as integration with Eigenvalue of 1.412 and Cronbach's alpha of 0.60 includes two variables as time spending with Turkish people and speaks Turkish language.

Table 5. 9. Factor analysis: Rotation of factor rotated component matrix

| Variables | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 |
|------------------------------|----------|----------|----------|----------|----------|----------|
| Social class | | | | | | |
| Differences in attitudes | .865 | | | | | |
| Friend and family effect | .681 | | | | | |
| Income effect | .649 | | | | | |
| Education level effect | .524 | | | | | |
| Sub-culture | | | | | | |
| Religious effect | | .818 | | | | |
| Region effect | | .804 | | | | |
| Occupation effect | | .455 | | | | |
| Integration | | | | | | |
| Time spending with Turkish | | | .833 | | | |
| Speaking Turkish language | | | .737 | | | |
| Impact of media | | | | | | |
| Watching Arab TV | | | | .851 | | |
| Watching Turkish TV | | | | .693 | | |
| Change in Consumption | | | | | | |
| Consumption habits | | | | | .837 | |
| Turkish culture | | | | | .809 | |
| Food Culture | | | | | | |
| Prefer Arab culture | | | | | | .921 |
| My culture influence | | | | | | .533 |
| Eigenvalue | 3.387 | 1.726 | 1.412 | 1.287 | 1.098 | 1.029 |
| Total variance | 22.57 | 34.08 | 43.49 | 52.07 | 59.39 | 66.25 |
| Cronbach's Alpha | 0.68 | 0.62 | 0.60 | 0.57 | 0.54 | 0.45 |

| | |
|-------------------------------|--|
| Bartlett's Test of Sphericity | Chi-square (χ^2) = 757.464, df = 105, $p = 0.000 < 0.01$ |
| KMO | 0.699 |

5.5.2. The Cultural Factors in Syrian Versus Iraqi Refugees

There are many cultural factors effecting consumers behaviour. Three main cultural factors are used to investigate the impact of cultural factors on the food buying behaviour of refugee households. These factors can be divided into sub-factors such as culture, sub- culture, and social class. Table 5.10 shows the cultural differences among Syrian and Iraqi refugees on food consumption behaviour. There are statistically significant differences among Syrian and Iraqi refugees in terms of social class variables ($p < 0.01$). It is concluded that Syrian were influenced by social class more than Iraqi. There were statistically significant differences between Syrian and Iraqi refugees in terms of sub-culture ($p < 0.01$) and Syrian refugees were influenced by sub-culture more than Iraqi refugees. Finally, there was a statistically significant difference between Syrian and Iraqi refugees in terms of integration ($p < 0.01$) and the Syrian refugees more integrated with the Turkish people and speak Turkish language more than Iraqi refugees.

Table 5. 10. The cultural differences between Syrian and Iraqi refugees

| Cultural factors | Syrian refugees Mean Score | Iraqi refugees Mean Score | P- value |
|---------------------------------|-------------------------------|------------------------------|----------|
| Social class | 0.20 | -0.17 | 0.00* |
| The impact of sub-culture | 0.26 | -0.21 | 0.00* |
| Integration with Turkish people | 0.21 | -0.18 | 0.00* |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.5.3. The Impact of the Cultural Factors on Choosing of Product Origin

Table 5.11 shows the relationship between the cultural factors and refugees' attitudes towards the origin of product. There are statistically significant associations between social class and Arab products ($p < 0.05$). Whereas there were not statistically significant associations between social class and product origin and Turkish products ($p = 0.24$ and $0.13 > 0.05$ respectively). With regards to the impact of sub-culture, there were not statistically significant associations between sub-culture and Arab products ($p > 0.05$). Whereas, there was statistically significant associations between sub-culture and product origin and Turkish products ($p < 0.05$). Finally, the impact of integration with Turkish people had statistically significant associations with product

origin and Turkish products ($p < 0.05$). Whereas, the impact of integration with Turkish people had not statistically significant associations with Arab products ($p > 0.05$).

Table 5. 11. The impact of acculturation on attitudes towards origin of foods

| Cultural factors | Attitudes towards origin of foods (Chi-Square) | | |
|---------------------------------|--|----------------|---------------|
| | Arab foods | Product origin | Turkish foods |
| Social class | 0.04** | 0.24 | 0.13 |
| The impact of sub-culture | 0.24 | 0.00* | 0.01* |
| Integration with Turkish people | 0.64 | 0.01* | 0.01* |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.5.4. Respondents Attitudes Towards Homelands and Turkish Products

Table 5.12 shows the differences between the Syrian and Iraqi refugees in terms of the origin of foods. There were statistically significance differences among the refugee groups in terms of the first factor ($p < 0.10$) and Syrian refugees prefer Arab foods while Iraqi refugees prefer Turkish foods. There were no statistically significance differences among the refugee groups ($p > 0.05$). There were statistically significance differences among the refugee groups in terms of the factor of Turkish foods ($p < 0.05$) which mean that Iraqi refugees prefer more Turkish foods, whereas Syrian refugees prefer more their homeland foods. Therefore, H2 Hypothesis, there are differences among Syrian and Iraqi refugees towards homeland products and Turkish products can be partly accepted.

Table 5. 12. The differences among refugees of origin of products

| Attitudes towards origin of foods | Mean score | | p- value |
|--------------------------------------|------------|-------|----------|
| | Syrian | Iraqi | |
| I prefer Arab foods to Turkish foods | 3.42 | 2.95 | 0.10*** |
| Product origin | 3.61 | 3.78 | 0.26 |
| Turkish foods | 3.59 | 3.76 | 0.04** |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.6. The Factors Influencing Point of Purchase Choice

Several factors can influence consumers' retail store choices. In this research, 28 variables were used to achieve the research objectives. Factor analysis technique is used to investigate the most important factors influencing point of purchase choice of the consumers. The refugee householders were asked to express the importance of

stated factors during their food purchase processes. The responses of refugee householders to the questions are presented below.

5.6.1. Reliability of Factors

There are different measures to assess reliability. The most common measure is reliability coefficient which is called Cronbach's alpha. The agreed lower limit for Cronbach's alpha is 0.70 or 0.60 and reliability under 0.60 is considered as unacceptable. Healthy conditions as the first factor consist of six variables. The Reliability or Cronbach's Alpha of this factor was 0.898 which has acceptable condition. The second factor representing place and facilities includes five variables. Its reliability was 0.901 and this factor has acceptable point. The culture and habit factor includes six variables and this factor has acceptable reliability with 0.642. The fourth factor as product characteristics includes four variables with a reliability of 0.886. The fifth factor represents staff characteristics of sale points and includes four variables with a reliability of 0.818. The six factors as price have three variables with reliability of 0.837. The seventh factor as store ownership has one variable with no reliability value. The reliability test is shown in table 5.13 below.

Table 5. 13. Cronbach's alpha test results of the factors influencing point of purchase choice

| Factors | N. of items | Reliability or Cronbach's Alpha |
|--------------------------|-------------|---------------------------------|
| Healthy conditions | 6 | 0.898 |
| Place and facilities | 6 | 0.900 |
| Culture and habits | 5 | 0.901 |
| Product characteristics | 4 | 0.886 |
| characteristics of staff | 3 | 0.797 |
| Price | 3 | 0.837 |
| Store ownership | 1 | |
| Total | 28 | |

Table 5.14 shows whether the data is suitable for factor analysis. The results of Kaiser-Meyer-Olkin (KMO) or measure of sampling adequacy indicate that the data is suitable to apply factor analysis. The Bartlett's test or test of sphericity indicates whether a given correlation matrix is an identity matrix or the variables are unrelated.

The level of significance must be less than 0.05 for these values meaning that there is significant relationship among the variables. The value of Kaiser-Meyer-Olkin (0.838) and the value of Bartlett's test of sphericity ($p = 0.000$) indicate that factor analysis is appropriate and can be applied for the data. The total values in Table 5.14 give the number of variances accounted by each factor. The % of variance column gives the percentage of variance accounted by each factor. The cumulative column gives the percentage of variance accounted by each factor until to the seventh factor, whereas each factor includes its variance and the previous factor variance. The factors with eigenvalues greater than one are considered significant (Hair et al., 2014).

The factors from the first to the seventh have eigenvalues greater than one are significant. The value of cumulative displays the variance of each factor that have eigenvalue greater than one collectively. The second row includes the variance of second factor and the previous factor. The third row includes the variance of third factor and previous factor etc. If the cumulative result explains 60% of the total variance, this is considered satisfactory. The value of cumulative for these seven factors equals 75.148% indicating that seven factors represent 75.148% of the total variance.

Table 5. 14. Total variance explained and initial eigen values of the factor analysis

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 9.379 | 33.495 | 33.495 | 9.379 | 33.495 | 33.495 |
| 2 | 2.885 | 10.302 | 43.798 | 2.885 | 10.302 | 43.798 |
| 3 | 2.614 | 9.335 | 53.132 | 2.614 | 9.335 | 53.132 |
| 4 | 1.934 | 6.907 | 60.040 | 1.934 | 6.907 | 60.040 |
| 5 | 1.792 | 6.398 | 66.438 | 1.792 | 6.398 | 66.438 |
| 6 | 1.358 | 4.851 | 71.289 | 1.358 | 4.851 | 71.289 |
| 7 | 1.081 | 3.859 | 75.148 | 1.081 | 3.859 | 75.148 |
| 8 | .772 | 2.757 | 77.905 | | | |
| 9 | .704 | 2.513 | 80.418 | | | |
| 10 | .597 | 2.134 | 82.552 | | | |
| 11 | .553 | 1.975 | 84.526 | | | |
| 12 | .528 | 1.886 | 86.412 | | | |
| 13 | .483 | 1.727 | 88.139 | | | |
| 14 | .367 | 1.311 | 89.450 | | | |
| 15 | .336 | 1.200 | 90.650 | | | |
| 16 | .331 | 1.181 | 91.830 | | | |
| 17 | .302 | 1.077 | 92.907 | | | |
| 18 | .282 | 1.006 | 93.914 | | | |

| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
|-----------|-------|---------------|--------------|-------|---------------|--------------|
| 19 | .254 | .907 | 94.821 | | | |
| 20 | .235 | .840 | 95.661 | | | |
| 21 | .207 | .740 | 96.401 | | | |
| 22 | .204 | .729 | 97.130 | | | |
| 23 | .181 | .646 | 97.775 | | | |
| 24 | .154 | .550 | 98.325 | | | |
| 25 | .149 | .531 | 98.857 | | | |
| 26 | .122 | .437 | 99.294 | | | |
| 27 | .108 | .386 | 99.679 | | | |
| 28 | .090 | .321 | 100.000 | | | |

Factor rotation or factor loadings explain the correlation of each variable and the factor. This test is conducted to measure the degree of correspondence between the variables and the factors. Three techniques can be applied to conduct rotation of factors. The Promax technique was used in this study. The significance level of factor loadings is related to the sample size. For this study, 252 respondents were included so factor loadings of 0.35 and above are significant. The results of factor loadings or rotation show that 28 variables were transported into seven representative factors. Factor loading refers to the level of correspondence between the variables and factors. More value of factor loading means more correspondence between the factors and variables.

Out of 28 variables, seven factors had eigenvalues with greater than one and their cumulative value equals 75.15% indicating that seven factors explain 75.15% of the total variance. The reliability or Cronbach's Alpha of the factors influencing point of sale choice changed from 0.797 to 0.901. They have acceptable reliability because their values were greater than 0.60 (Hair et al., 2014). The loading value must be greater than 0.35 to be significant.

The first factor labelled as healthy condition with Eigenvalue of 9.38 and Cronbach's alpha of 0.898 included six variables as pesticide residue, food safety, hygiene of the store, organic product, product nutritional value, and product with GMO or hormone. The variable of pesticide residues has factor loading of 0.889% indicating that this variable explains the first factor by 88.9%. This applies to the rest of variables.

The second factor labelled as place or facilities of sale point with Eigenvalue of 2.86 and Cronbach's alpha of 0.900 had six variables as transportation service, availability of products in all seasons, bulk shopping, parking facilities, distance, and easy access to stores. The variable of transportation service has factor loading of

0.934% which means that this variable explains the second factor by 93.4%. This applies to the rest of variables.

The third factor labelled as culture and habits with Eigenvalue 2.61 and Cronbach's alpha of 0.901 included five variables as homeland products, Turkish products, family effect, friend effect, and product origin. The variable of homeland product has factor loading of 0.901% which means that this variable explains the third factor by 90.1%. This applies to the rest of variables.

The fourth factor represents product factor with Eigenvalue 1.93 and Cronbach's alpha of 0.886 included four variables as product taste, availability of various products, product quality, and product appearance. The variable of product taste has factor loading of 0.953% which means that this variable explains the fourth factor by 95.3%. This applies to the rest of variables.

The fifth factor represents characteristics of staffs in the sale points with Eigenvalue 1.79 and Cronbach's alpha of 0.797 had three variables as respect and kindness, employee behaviour, and their languages. The variable of respect and kindness has factor loading of 0.953% which means that this variable explains the fifth factor by 95.3%. This applies to the rest of variables.

The sixth factor was labelled as price with Eigenvalue 1.36 and Cronbach's alpha of 0.837 also included three variables as price suitability, promotion, and gifts. The variable of price suitability has factor loading of 0.941% which means that this variable explains the sixth factor by 94.1%. This applies to the rest of variables.

The seventh factor is related to store ownership and it has Eigenvalue of 1.08 and no value Cronbach's alpha due to only one item was loaded onto this factor. The variable of store ownership has factor loading of 0.705% which means that this variable explains the seventh factor by 70.5%. This applies to the rest of variables.

Loading on seven factors explains and represents 75.15 % of the total variance. The refugee householders were asked to express the importance of these factors during the food purchasing process. The results indicated that the price factor (4.07) had the highest average score and it is followed by the product characteristic factors (4.02), the factor of healthy conditions (3.87), the factor of staff characteristics (3.77), the factor of culture and habits (3.69) and the factor of social relations with store owner (3.60).

The current study confirmed that the price dimension was determined as the most influential factor and it is followed by product characteristics, healthy conditions, place, and facilities, staff characteristics, and culture, and habits. Bad economic conditions make the refugee households to prefer stores according to price and product. Chamhuri and Batt (2013) and Hoek et al. (2015) confirmed similar results where price and quality were seemed to be important through their decision towards fruit and vegetables. Also, Theodoridis and Chatzipanagiotou (2006) revealed that personnel, pricing, products, and in-store convenience were statistically significant driver attributes towards store choice. However, Carpenter and Moore (2006) confirmed that the cleanliness was the most important attribute. Dal and Kizilaslan (2018) stated that Turkish consumers paid the most attention to cleanliness. Therefore, H3 hypothesis, there is a significant relationship between consumer variables and store choice, was been accepted. The factor analysis results in Table 5.15 indicated that seven store attributes were considered as essential in the decision making of food purchase. These seven factors were tested whether there is an association between these factors and store choice according to the food categories.

Table 5. 15. Factor analysis results and constructs reliability

| Factors | Mean Score | Factor 1 | Factor 2 | Factor3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 |
|-------------------------------------|------------|----------|----------|---------|----------|----------|----------|----------|
| <i>Healthy conditions</i> | 3.87 | | | | | | | |
| Pesticide residue | 3.78 | .889 | | | | | | |
| Food safety | 4.02 | .818 | | | | | | |
| Store hygiene | 3.90 | .816 | | | | | | |
| Organic product | 3.82 | .798 | | | | | | |
| Product with GMO or hormone | 3.72 | .766 | | | | | | |
| Nutritional content of product | 3.94 | .741 | | | | | | |
| <i>Place and facilities</i> | 3.74 | | | | | | | |
| Transportation service | 3.65 | | .934 | | | | | |
| Bulk shopping | 3.68 | | .839 | | | | | |
| Product availability in all seasons | 3.79 | | .826 | | | | | |
| Parking facility | 3.59 | | .822 | | | | | |
| Easy access to the stores | 3.85 | | .800 | | | | | |
| Distance to store | 3.89 | | .609 | | | | | |

| Factors | Mean Score | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 | Factor 7 |
|---------------------------------|------------|--|----------|----------|----------|----------|----------|----------|
| <i>Culture and habits</i> | 3.69 | | | | | | | |
| Homeland products | 3.73 | | | .901 | | | | |
| Turkish products | 3.68 | | | .884 | | | | |
| Family effects | 3.72 | | | .872 | | | | |
| Friend effects | 3.60 | | | .781 | | | | |
| Product origin | 3.71 | | | .767 | | | | |
| <i>Product characteristics</i> | 4.02 | | | | | | | |
| Product taste | 4.11 | | | | .953 | | | |
| Product availability | | | | | | | | |
| Product quality | 4.02 | | | | .871 | | | |
| Product appearance | 4.07 | | | | .829 | | | |
| | 3.89 | | | | .762 | | | |
| <i>Characteristics of staff</i> | 3.77 | | | | | | | |
| Respect and kindness | 3.85 | | | | | .885 | | |
| Employee behavior | 3.73 | | | | | .827 | | |
| Their languages | 3.73 | | | | | .687 | | |
| <i>Price</i> | 4.07 | | | | | | | |
| Price suitability | 4.14 | | | | | | .941 | |
| Promotion | 4.18 | | | | | | .787 | |
| Gifts | 3.89 | | | | | | .774 | |
| <i>Social relation</i> | 3.60 | | | | | | | |
| Store ownership | 3.60 | | | | | | | .705 |
| Eigenvalue | | 9.38 | 2.86 | 2.61 | 1.93 | 1.79 | 1.36 | 1.08 |
| Total variance | | 33.50 | 43.80 | 53.13 | 60.04 | 66.44 | 71.29 | 75.15 |
| Cronbach's Alpha | | 0.898 | 0.900 | 0.901 | 0.886 | 0.797 | 0.837 | |
| Bartlett's Test of Sphericity | | Chi-square (χ^2) = 5052.846, df = 378, $p < 0.01$ | | | | | | |
| KMO | | 0.836 | | | | | | |

Pearson's correlation (r) results in Table 5.18 indicated that despite the importance of these seven factors to the refugee households, they were not associated with food categories. In the meat case, the refugee householders were influenced by healthy conditions, place and facilities of stores. Fresh meat product poses a higher level of risk to consumers (MaCarthy and Orelliy, 1999). The results were presented in table 5.16 below indicate that consumers try to select a predetermined store. The results of the seventh attribute (store ownership) had relationships with vegetables and cereals products (p = 0.10).

While these seven factors were important, they were not associated with food categories. In the meat case, the refugee householders were influenced by healthy conditions, place and facilities of stores. Fresh meat product poses a higher level of risk to consumers (MaCarthy and Orelliy, 1999). The results were presented in table 5.16 below indicate that consumers try to select a predetermined store. The results of the seventh attribute (store ownership) had relationships with vegetables and cereals products (p = 0.10).

products. Social relations with retailers influence the refugee households for selecting food stores especially for cereal products. The findings indicate that the impacts of store attributes were significant for the refugee households but insignificant through the selection store for food categories. This may be explained by those points of sale in Turkey that provide similar features essentially supermarket brands. Uusitalo (2001) found similar results in Finland where brands provide similar functional benefits.

Table 5. 16. Pearson's r results by food categories

| Store attributes | Vegetables | Fruit | Dairy products | Meat products | Cereals |
|-------------------------|------------|-------|----------------|---------------|---------|
| Healthy conditions | 0.57 | 0.14 | 0.46 | 0.09*** | 0.9 |
| Place and facilities | 0.85 | 0.57 | 0.12 | 0.03** | 0.52 |
| Culture and habits | 0.89 | 0.80 | 0.23 | 0.47 | 0.9 |
| Product characteristics | 0.64 | 0.15 | 0.17 | 0.95 | 0.63 |
| Staff characteristics | 0.9 | 0.39 | 0.60 | 0.34 | 0.50 |
| Price | 0.49 | 0.34 | 0.72 | 0.17 | 0.40 |
| Store ownership | 0.06*** | 0.39 | 0.32 | 0.55 | 0.07*** |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.7. Consumers' Preferences of Store Based on Food Categories

Table 5.17 shows the results of refugee households' preferences on the points of food purchases. The majority of refugee householders preferred the local markets (Pazar) to buy fresh vegetables (82.9%) and fruit (79.0%), while the majority of refugee householders preferred supermarkets to buy dairy products (61.1%) and meat products (61.5%). Whereas, 40.5% of refugee households preferred markets (bakkals) to buy cereals products.

With respect to consumers' preferences, several studies reported that the preferences of store differs according to food categories. Chamhuri and Batt (2013) pointed out that the respondents were more selective through buying. The reserach findings show that supermarket is the best point to purchase meat and dairy products, whereas traditional markets or local markets are preferred for fresh food products such

as fruit and vegetables. Finally, the market is preferred by the refugee households for cereal products because they can find their homeland products and the owners of stores were Arab people. The findings of current study also indicate that local markets or neighborhood markets in Turkey have a competitive price advantage. Dal and Kizilaslan (2018) demonstrated that consumers in Turkey pay attention to product picking and the local markets provide this option to consumers. Unavailability of meat products in this type of markets make consumer purchase meat products from trusted markets. Uusitalo (2001) reported that all brands in Finland seemed to provide similar functional benefits and consumer preceptions with regard to grocery retail format were narrow. Wet et al. (2012) indicated that fresh products such as fruit and vegetables were preferred to purchase from hypermarket and wet markets in Malaysia.

Table 5. 17. Consumers' preferences on the points of food purchases (%)

| Food category | Point of sale (%) | | | |
|----------------|-------------------|--------|--------------|--------------|
| | Supermarket | Market | Greengrocery | Local market |
| Vegetables | 8.7 | 0.4 | 7.9 | 82.9 |
| Fruit | 9.5 | 1.6 | 9.9 | 79.0 |
| Dairy products | 61.1 | 17.5 | 0.8 | 20.6 |
| Meat products | 61.5 | 27.4 | 1.2 | 9.9 |
| Cereals | 33.7 | 40.5 | 1.2 | 24.6 |

5.8. Factors Influencing Consumers Food Purchase Points Based on Food Categories

Table 5.18 shows the differences among the food store preferences of refugee households based on socio-demographic variables and food categories. Research findings show that there were statistically significant differences in nationality through buying vegetables ($p < 0.05$), fruit ($p < 0.10$), dairy products ($p < 0.01$), and meat products ($p < 0.05$). There were also statistically significant differences in gender through buying dairy ($p < 0.10$), meat ($p < 0.10$) and cereals ($p < 0.01$). There were statistically significant differences in marital status through buying vegetables ($p < 0.05$) and dairy products ($p < 0.10$). However, there was statistically significant differences for age factor through buying dairy products ($p < 0.01$), meat products ($p < 0.05$), and cereals ($p < 0.10$). There were statistically significant differences for the education factor through buying only fruit ($p < 0.05$). The results also revealed that the district had significant differences through buying vegetables ($p < 0.10$), fruit ($p < 0$

.10), dairy and meat products ($p < 0.01$). Finally, the length of stay and household size had no statistically significant differences through buying food categories ($p > 0.10$).

To identify the significant differences among the refugee households, t and ANOVA tests were used. This analysis was designed among three types of variables such as socio-demographic, economic, and behavioural variables. The results confirmed that socio-demographic variables such as nationality, gender, marital status, age, education level, and district had an influence on the point of purchase choice at least for one food category. The findings suggest that household size had no significant differences of store choice, while Carpenter and Moore (2006) suggested that household size was found to be a significant predictor of patronage towards traditional supermarkets, and education, income, and household size were predicted a patronage within the supercenter format. Prasad and Reddy (2007) confirmed that age and family size had a significant influence on the type of food and grocery retail outlets. Our study added new factors such as district and length of stay on refugee conditions. Therefore, H3a Socio-demographic variables have a significant influence on store choice can be partly accepted.

Table 5. 18. The differences in food store preferences of refugee households-based socio-demographic variables

| Socio-demographic Variables | Mean Score of Food Categories | | | | |
|-----------------------------|-------------------------------|---------|----------------|---------------|---------|
| | Vegetables | Fruit | Dairy products | Meat products | Cereals |
| Nationality | | | | | |
| Syrian | 3.53 | 3.47 | 2.16 | 1.75 | 2.26 |
| Iraqi | 3.75 | 3.67 | 1.53 | 1.47 | 2.09 |
| p-value | 0.05** | 0.08*** | 0.00* | 0.02** | 0.26 |
| Gender | | | | | |
| Male | 3.62 | 3.56 | 1.92 | 1.68 | 2.31 |
| Female | 3.71 | 3.62 | 1.63 | 1.46 | 1.94 |
| p-value | 0.44 | 0.61 | 0.06*** | 0.08*** | 0.01* |
| Marital status | | | | | |
| Married | 3.76 | 3.67 | 1.98 | 1.67 | 2.24 |
| Single | 3.50 | 3.48 | 1.62 | 1.52 | 2.11 |
| Divorced | 4.0 | 3.75 | 2.00 | 1.25 | 1.50 |
| p-value | 0.04** | 0.23 | 0.06*** | 0.33 | 0.34 |

| Socio-demographic Variables | Mean Score of Food Categories | | | | |
|---------------------------------|-------------------------------|---------|----------------|---------------|---------|
| | Vegetables | Fruit | Dairy products | Meat products | Cereals |
| Age | | | | | |
| 18–25 years | 3.52 | 3.51 | 1.49 | 1.43 | 2.00 |
| 26–35 years | 3.71 | 3.61 | 2.19 | 1.67 | 2.43 |
| 36–45 years | 3.73 | 3.64 | 2.00 | 1.93 | 2.18 |
| More than 45 years | 3.82 | 3.71 | 1.61 | 1.46 | 2.00 |
| p-value | 0.26 | 0.71 | 0.00* | 0.02** | 0.08*** |
| Household size | | | | | |
| Less than 3 | 3.41 | 3.41 | 1.83 | 1.48 | 2.28 |
| From 3 to 4 | 3.75 | 3.66 | 1.94 | 1.70 | 2.25 |
| From 5 to 6 | 3.68 | 3.54 | 1.85 | 1.59 | 2.26 |
| More than 6 | 3.61 | 3.50 | 1.61 | 1.55 | 1.89 |
| p-value | 0.36 | 0.52 | 0.46 | 0.69 | 0.17 |
| Education level | | | | | |
| Illiterate | 3.46 | 3.69 | 1.54 | 1.54 | 1.77 |
| Primary | 4.00 | 4.00 | 2.00 | 1.62 | 2.08 |
| Secondary | 3.44 | 3.00 | 1.56 | 1.63 | 1.81 |
| High | 3.60 | 3.62 | 1.56 | 1.45 | 2.04 |
| Bachelor | 3.71 | 3.65 | 1.56 | 1.66 | 2.24 |
| Master | 3.56 | 3.39 | 1.91 | 1.58 | 2.44 |
| p-value | 0.43 | 0.04** | 0.33 | 0.85 | 0.26 |
| District | | | | | |
| Canik | 3.91 | 3.83 | 2.35 | 1.83 | 2.28 |
| Atakum | 3.56 | 3.49 | 1.64 | 1.53 | 2.08 |
| Ilkadim | 3.63 | 3.36 | 1.83 | 1.60 | 2.31 |
| p-value | 0.07*** | 0.09*** | 0.00* | 0.16 | 0.36 |
| Length of stay in Samsun | | | | | |
| Less than 3 years | 3.68 | 3.58 | 1.74 | 1.61 | 2.25 |
| From 3 to 4 years | 3.74 | 3.68 | 1.85 | 1.54 | 2.15 |
| From 5 to 6 years | 3.46 | 3.45 | 1.86 | 1.63 | 1.96 |
| Above of 6 years | 3.80 | 3.80 | 2.40 | 1.60 | 2.60 |
| p-value | 0.32 | 0.51 | 0.62 | 0.95 | 0.37 |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

Table 5.19 shows the differences in refugee households' food store preferences based on economic variables and food categories. Job-status had not significant differences through buying food categories ($p > 0.10$), whereas the number of workers had significant differences through buying dairy products ($p = 0.02 < 0.05$) and cereal products ($p < 0.05$). Household income had significant differences through buying vegetables ($p < 0.05$) and dairy products ($p < 0.01$). Finally, cash assistance had no statistically significant impact on store choice through buying all food categories ($p > 0.10$).

Economic variables such as number of workers in household and household income level had influences on the point of purchase choice at least for one food category. Whereas, the job status or occupation had no significant influence on store

choice. However, Prasad and Reddy (2007) confirmed the importance of occupation in-store choice. There are differences in the price of food products especially for fruit and vegetables at different stores in Turkey. Therefore, the level of income plays an important role in-store choice. Refugees with limited income prefer neighbourhood markets where prices are low. Therefore, H3b. Economic variables have a significant influence on store choice can be partly accepted.

Table 5. 19. The difference in food store preferences of refugee households based on economic variables

| Economic Variables | Mean score / Food categories | | | | |
|--------------------------|------------------------------|-------|----------------|---------------|---------|
| | Vegetables | Fruit | Dairy products | Meat products | Cereals |
| Job-status | | | | | |
| No work | 3.69 | 3.66 | 1.55 | 1.46 | 2.11 |
| I work | 3.73 | 3.63 | 1.90 | 1.62 | 2.15 |
| Student | 3.53 | 3.48 | 1.90 | 1.67 | 2.22 |
| p-value | 0.27 | 0.39 | 0.13 | 0.38 | 0.82 |
| Number of workers | | | | | |
| No person | 3.70 | 3.67 | 2.03 | 1.70 | 2.36 |
| One person | 3.63 | 3.49 | 1.63 | 1.55 | 1.99 |
| Two persons | 3.56 | 3.44 | 1.50 | 1.38 | 1.91 |
| Three persons | 3.5 | 3.83 | 1.33 | 1.17 | 1.83 |
| p-value | 0.80 | 0.38 | 0.02** | 0.19 | 0.04** |
| Income level | | | | | |
| Less than 1500 TL | 3.73 | 3.68 | 1.56 | 1.63 | 2.17 |
| 1500 -2000 TL | 3.91 | 3.83 | 2.04 | 1.74 | 2.34 |
| 2000-3000 TL | 3.45 | 3.45 | 2.15 | 1.68 | 2.21 |
| More than 3000 TL | 3.64 | 3.52 | 1.53 | 1.43 | 2.04 |
| p-value | 0.04** | 0.12 | 0.00* | 0.18 | 0.53 |
| Cash assistance | | | | | |
| Yes | 3.76 | 3.76 | 1.87 | 1.50 | 2.08 |
| No | 3.63 | 3.55 | 1.90 | 1.61 | 2.18 |
| p-value | 0.39 | 0.19 | 0.74 | 0.49 | 0.61 |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

Table 5.20 shows the differences in the refugee households' food store preferences based on behavioral variables. The factor of food buyer had significant differences through buying dairy products ($p < 0.05$). The factor of the number of daily meals had no significant differences through buying food categories ($p < 0.10$). The factor of buying off-season had a significant impact on the store choice of the refugee households through buying vegetables ($p < 0.10$) and fruit ($p < 0.01$). The factor of listing food needs had a significant impact on store choice only through buying vegetable products ($p < 0.10$). Finally, the payment method had significant differences through buying vegetables ($p < 0.10$) and fruit ($p < 0.01$).

Finally, behavioural variables such as buyer, purchasing off-season foods, doing list before shopping, and payment method had an influence on point of purchase choice at least for one food category. While credit or debit cards could be used to buy fruits and vegetables from supermarkets, there is no option for the refugee households to pay via credit or debit cards in neighbourhood markets. Therefore, the H3c. Behavioural variables have a significant influence on store choice can be partly accepted; because of the variables of number of meals had no significant differences on store choice.

Table 5. 20. The difference in refugee households' food store preferences concerning behavioral variables

| Behavioural Variables | Mean Score of Food Categories | | | | |
|-----------------------|-------------------------------|-------|----------------|---------------|---------|
| | Vegetables | Fruit | Dairy products | Meat products | Cereals |
| Buyer | | | | | |
| Father or mother | 3.70 | 3.63 | 1.90 | 1.57 | 2.23 |
| Father and mother | 3.79 | 3.68 | 1.16 | 1.42 | 1.84 |
| Children | 3.51 | 3.56 | 1.85 | 1.77 | 2.21 |
| p-value | 0.39 | 0.88 | 0.04** | 0.34 | 0.39 |
| N. of Meals | | | | | |
| Two | 3.69 | 3.59 | 1.88 | 1.59 | 2.20 |
| Three | 3.60 | 3.57 | 1.70 | 1.63 | 2.17 |
| Four | 3.76 | 3.65 | 2.18 | 1.35 | 1.94 |
| p-value | 0.63 | 0.94 | 0.21 | 0.51 | 0.69 |
| Off-season | | | | | |
| Never | 3.90 | 3.90 | 1.64 | 1.36 | 1.81 |
| Rarely | 3.66 | 3.66 | 2.12 | 1.54 | 2.22 |
| Very rarely | 3.73 | 3.67 | 1.91 | 1.79 | 2.34 |
| Occasionally | 3.57 | 3.50 | 1.70 | 1.59 | 2.17 |
| Frequently | 3.26 | 3.05 | 1.74 | 1.47 | 2.42 |
| p-value | 0.07*** | 0.01* | 0.32 | 0.18 | 0.16 |
| Doing list | | | | | |
| Never | 3.76 | 3.69 | 1.71 | 1.39 | 1.94 |
| Rarely | 3.53 | 3.50 | 1.76 | 1.74 | 2.35 |
| Very rarely | 3.28 | 3.27 | 1.50 | 1.55 | 2.00 |
| Occasionally | 3.72 | 3.65 | 2.09 | 1.67 | 2.39 |
| Frequently | 3.85 | 3.76 | 1.63 | 1.57 | 2.03 |
| Always | 3.57 | 3.53 | 1.83 | 1.50 | 2.21 |
| p-value | 0.09*** | 0.35 | 0.27 | 0.57 | 0.23 |
| Payment Way | | | | | |
| Cash | 3.72 | 3.69 | 1.82 | 1.55 | 2.17 |
| ATM | 3.46 | 3.33 | 1.87 | 1.62 | 2.33 |
| p-value | 0.06*** | 0.01* | 0.81 | 0.66 | 0.39 |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.9. Consumers Preferences Based on Store Attributes

Store choice is influenced by different attributes. Based on the literature review eleven common factors were chosen for this study. The respondents were asked to choose their point of sale based on products (as freshness, quality, variety, and healthy products, store facilities as location, desired amount and cleanliness, price as price and

availability of offers, and culture as habits and ownership of store. Points of purchase choice of the respondents were classified under five formats as market, greengrocery, no difference among point sale, local market, and supermarket. In the study region, there are Iraqi and Syrian food stores.

Table 5.21 shows the result of eleven factors to choose four types of stores. With regard to freshness factor, the half of respondents (50.6%) preferred local markets and 27.9% preferred supermarkets. About half of respondents (50.6%) preferred to purchase from supermarket based on product quality and 24.7% preferred street market. While 55.8% of the respondents preferred supermarkets for variety of products and 25.5% preferred local markets. Healthy products were preferred by 15% and 23.5% of the respondents to purchase from supermarket and local markets, respectively.

The majority of respondents (63.3%) preferred the supermarkets for location and 15.1% preferred the local markets. To purchase desired amount, 49.9% of the respondents preferred supermarkets and 30.3% preferred the local markets. Majority of respondents (71.7%) preferred supermarkets for cleanliness and 11.2% of the respondents considered there is no difference among formats.

About half of the respondents (48.2%) considered supermarket as the best point of purchase choice for price, whereas 30.7% considered that local market is better. With regards to offers, 66.8% and 14% of the respondents stated that supermarkets and local markets were the best point of purchase for food purchases, respectively.

Finally, with regards to habits, 52.4 and 22% of the respondents used to purchase from supermarkets and local markets, respectively. While 54.8% of the respondents prefer supermarket because of familiar with owners of stores, while 20.3% of the respondents considered there is no difference among the store formats.

Table 5. 21. Points of sale choices among the refugee households based on sale attributes

| | Point sale attributes | Market | Supermarket | No difference | Greengrocery | Local Market |
|-------------------------|-----------------------|--------|-------------|---------------|--------------|--------------|
| Product characteristics | Freshness | 3.2 | 27.9 | 6.8 | 11.6 | 50.6 |
| | Quality | 7.2 | 50.6 | 11.6 | 6.0 | 24.7 |
| | Variety | 6.0 | 55.8 | 9.6 | 3.2 | 25.5 |
| | Healthy | 4.0 | 51.0 | 14.7 | 6.8 | 23.5 |
| Facilities | Location | 7.2 | 63.3 | 9.6 | 4.8 | 15.1 |
| | Desired amount | 5.6 | 49.4 | 10.8 | 4.0 | 30.3 |
| | Cleanliness | 7.2 | 71.7 | 11.2 | 4.0 | 6.0 |
| Price | Price | 5.6 | 48.2 | 8.8 | 6.8 | 30.7 |
| | Offers | 4.4 | 66.8 | 9.6 | 5.2 | 14.0 |
| Culture | Habits | 8.0 | 52.4 | 14.4 | 3.2 | 22.0 |
| | Ownership | 13.9 | 54.8 | 20.3 | 6.8 | 13.1 |

5.10. Factors Influencing Consumers Food Purchase Points Based Store Attributes

5.10.1. The Differences Among Refugees with Regard to Socio-Demographic Variables

Table 5.22 shows the differences in the refugee households' through store choices based on socio-demographic variables and store attributes. Person Chi-square (χ^2) difference tests was performed to test the associations between socio-demographic variables and store choices. Eleven attributes were used to know the differences among the respondents on their store selection. The results show that nationality had statistically significant differences on the attributes of freshness, quality, variety, healthy conditions, desired amount, price and ownership. Gender had statistically significant differences on the attributes of healthy, location, cleanliness, price, offers and habits. The marital status had statistically significant differences on the attributes of quality, variety, location and price. Household size had no statistically significant differences on the attributes. Age of the refuge householders had statistically significant differences on the attributes of quality, variety, healthy, cleanliness, offers, and habits. The educational level had statistically significant differences on the attribute of freshness. The district had statistically significant differences on the attributes of quality, variety, location, cleanliness, price, and habits.

Finally, length of stay in Samsun had statistically significant differences on the attributes of variety and offers.

Table 5. 22. Refugees preferences based on socio-demographic variables

| Variables | Chi square / p-value | | | | | | | | | | |
|-----------------|----------------------|---------|---------|---------|----------|----------------|-------------|--------|--------|--------|-----------|
| | Freshness | Quality | Variety | Healthy | Location | Desired amount | Cleanliness | Price | Offers | Habits | Ownership |
| Nationality | 0.02** | 0.00* | 0.00* | 0.03* | 0.10 | 0.00* | 0.50 | 0.00* | 0.24 | 0.12 | 0.00* |
| Gender | 0.61 | 0.34 | 0.13 | 0.03* | 0.02* | 0.40 | 0.05* | 0.04* | 0.00* | 0.02* | 0.17 |
| Marital status | 0.26 | 0.03* | 0.03* | 0.92 | 0.02* | 0.38 | 0.44 | 0.06** | 0.17 | 0.16 | 0.32 |
| Household size | 0.41 | 1.00 | 0.62 | 0.77 | 0.41 | 0.43 | 0.81 | 0.30 | 0.25 | 0.48 | 0.62 |
| Age | 0.32 | 0.00* | 0.05* | 0.02* | 0.18 | 0.12 | 0.07* | 0.13 | 0.08* | 0.06* | 0.13 |
| Education level | 0.02** | 0.22 | 0.16 | 0.18 | 0.92 | 0.21 | 0.19 | 0.55 | 0.24 | 0.36 | 0.11 |
| District | 0.23 | 0.00* | 0.06** | 0.15 | 0.00* | 0.18 | 0.00* | 0.09** | 0.45 | 0.04* | 0.12 |
| Length of stay | 0.52 | 0.38 | 0.08** | 0.47 | 0.72 | 0.60 | 0.23 | 0.73 | 0.09** | 0.46 | 0.65 |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.10.2. The Differences Among Refugees with Regards to Economic Variables

Table 5.23 shows the differences in consumers preferences through store choice based on economic variables and store attributes. Job status had statistically significant differences on the attributes of location, cleanliness, price and offers. Number of workers in household had no statistically significant differences on the attribute of desired amount. Level of income had no statistically significant differences on the attributes of healthy conditions, desired amount, price and offers. Finally, cash assistance had no statistically significant differences on the attributes of freshness, healthy conditions and cleanliness.

Table 5. 23. Refugee households' preferences based on economic variables

| Variables | Mean score | | | | | | | | | | |
|-------------------|------------|---------|---------|---------|----------|----------------|------------|-------|--------|--------|-----------|
| | Freshness | Quality | Variety | Healthy | Location | Desired amount | Cleanlines | Price | Offers | Habits | Ownership |
| Job status | 0.12 | 0.29 | 0.18 | 0.46 | 0.04* | 0.67 | 0.02* | 0.08* | 0.08* | 0.66 | 0.15 |
| Number of workers | 0.87 | 0.38 | 0.58 | 0.34 | 0.87 | 0.04** | 0.51 | 0.76 | 0.67 | 0.25 | 0.34 |
| Income level | 0.13 | 0.48 | 0.92 | 0.02* | 0.59 | 0.01* | 0.92 | 0.02* | 0.02* | 0.23 | 0.33 |
| Cash assitance | 0.14 | 0.03 | 0.26 | 0.37 | 0.12 | 0.52 | 0.02* | 0.40 | 0.08 | 0.01 | 0.13 |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.10.3. The Differences with Regard to Behavioural Variables

Table 5.24 shows the differences in the refugee households' preferences through store choice based on behavioural variables and store attributes. Buyer and off-season food purchase had no significant differences on the listed attributes. Whereas, number of meals eaten had significant differences on the attributes of quality and healthy conditions. Doing list of food before shopping had significant differences on the attribute of desired amount. Finally, payment method had statistically significant differences on the attribute of ownership.

Table 5. 24. Refugee households' preferences based on behavioural variables

| Variables | Mean score | | | | | | | | | | |
|---------------------|------------|---------|---------|---------|----------|----------------|-------------|-------|--------|--------|-----------|
| | Freshness | Quality | Variety | Healthy | Location | Desired amount | Cleanliness | Price | Offers | Habits | Ownership |
| Buyer | 0.64 | 0.14 | 0.43 | 0.31 | 0.19 | 0.44 | 0.60 | 0.52 | 0.48 | 0.10 | 0.71 |
| N. of Meals | 0.53 | 0.02* | 0.58 | 0.09** | 0.61 | 0.15 | 0.37 | 0.50 | 0.96 | 0.29 | 0.16 |
| Off-season | 0.12 | 0.54 | 0.21 | 0.12 | 0.59 | 0.41 | 0.17 | 0.14 | 0.87 | 0.23 | 0.11 |
| Doing list of foods | 0.82 | 0.92 | 0.14 | 0.74 | 0.98 | 0.08** | 0.74 | 0.81 | 0.50 | 0.10 | 0.16 |
| Payment method | 0.22 | 0.24 | 0.38 | 0.19 | 0.19 | 0.76 | 0.41 | 0.27 | 0.54 | 0.54 | 0.00* |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.11. Measurement of Food Security

The assessment of the refugees' food security is the main aim in this study. Three different domains of food insecurity were used to assess the refugees' food security situation. The first-domain anxiety and uncertainty include one question represents the level of food security with regard to food supply. The second-domain insufficient quality includes three questions that represent the level of food security with regard to variety and preference. The third-domain insufficient food intake includes five questions. Finally, the total level of food security includes three previous domains or nine questions.

5.11.1. Anxiety and Uncertainty Domain

Anxiety and uncertainty consist of one indicator developed by USAID with two frequency food secure and food insecure. The table 5.25 below shows the results of anxiety and uncertainty domain. The results indicate that 67.3% of respondents were not worried about the amount of enough food, whereas 32.7% were worried.

5.11.2. Insufficient Quality Domain

The second-domain insufficient quality includes three questions. The results in Table 5.25 indicate that 81.3% of respondents got sufficient food quality during the year and 18.7% did not get. About sixty two percent of respondents were able to eat preferred food and 38.2% were not able to eat preferred food. About sixty six percent of respondents were able to eat desired food, whereas 33.9% were not able to eat desired food.

5.11.3. Insufficient Food Domain

The third-domain insufficient food intake includes five questions. According to the findings in Table 5.25, 86.5% of respondents got sufficient food quantity during the year and 13.5% did not get. About seventy six percent of respondents had sufficient money to buy sufficient food or to eat desired meal whereas 23.9% did not have sufficient money to buy sufficient food or to eat desired meal. Eighty one percent of respondents did not go to sleep hungry because no food to eat whereas 18.7% went to sleep hungry. Eighty one percent of respondents had a way to get food or did not remain without eating a whole a day and night and 19.5% had not way to get food or remained without eating a whole a day and night. Finally, 79.3% had easy access to food markets whereas 20.7% had not easy access to food markets.

Table 5. 25. Availability dimension results of food insecurity experience scale (FIES)

| Domains | Food security status | |
|---|----------------------|----------------|
| | Food secure% | Food insecure% |
| 1. Anxiety and uncertainty about the household food supply | | |
| In the last year, did you worry that your household would not have enough food? | 67.3 | 32.7 |
| 2. Insufficient Quality | | |
| Does your household get a sufficient quality of food during the year? | 81.3 | 18.7 |
| In the last year, did you or any household member have not been able to eat the kinds of foods you preferred because the lack of resources? | 61.8 | 38.2 |
| In the last year, did you or any household member have to eat some foods that really did not want to eat because the lack of resources? | 66.1 | 33.9 |
| 3. Insufficient food | | |
| Does your household get available or sufficient food quantity during the year? | 86.5 | 13.5 |
| Do you have enough money to buy sufficient food or to eat desired meal? | 76.1 | 23.9 |
| In the last year, were you or any household member go to sleep hungry because no food to eat? | 81.3 | 18.7 |
| In the last year, did you or any household member have no way to get food or remained without eating a whole a day and night? | 80.5 | 19.5 |
| Do you have easy access to food market? | 79.3 | 20.7 |

5.11.4. Total Food Security

Total food security status was estimated through combination of the three domains presented above. For instance, to estimate total food security, three stages were performed: indicator, domain level, and at total level, respectively. The Table 5.26 and Figure 5.2 below illustrate the food security status at three levels. More than 67% of the refugees experienced food security status at anxiety and uncertainty domain, 52.2% and 56.6% of the refugees experienced food security status at insufficient quality level and insufficient food domain levels, respectively. Finally, approximately 40% of the households experienced food security status after combination of three domains. It is concluded from the tables 5.25 and 5.26 that proportion of food security decreases gradually when moving from indicator to domain and then to total level.

Table 5. 26. Food security results according to dimension

| Domain | Food security status | |
|-------------------------|----------------------|-----------------|
| | Food- secure% | Food- insecure% |
| Anxiety and uncertainty | 67.3 | 32.7 |
| Insufficient quality | 52.2 | 47.8 |
| Insufficient food | 56.6 | 43.4 |
| Total | 39.7 | 60.3 |

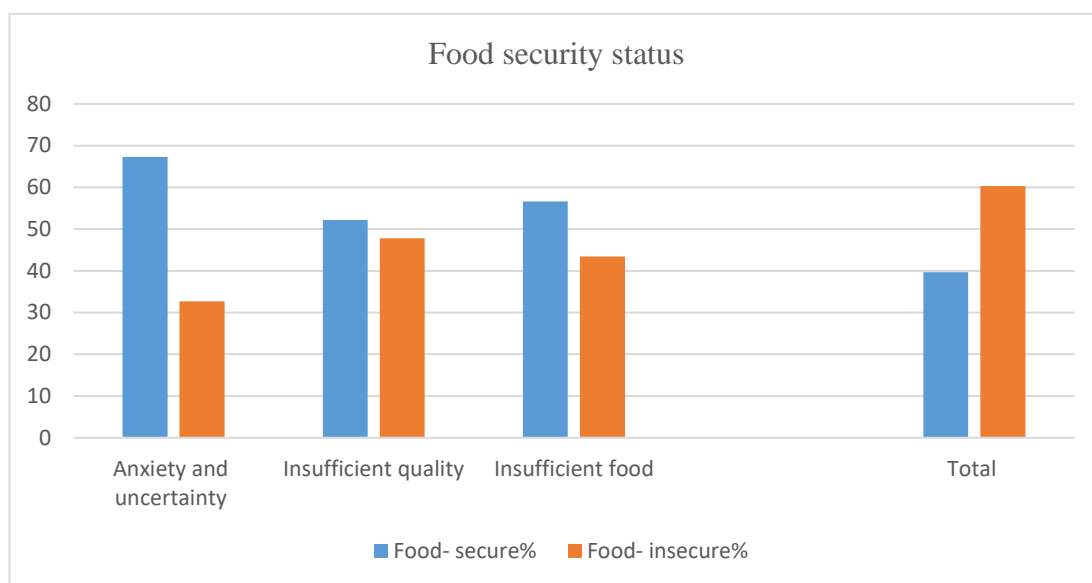


Figure 5. 1. Food security status among refugees at all domains

5.11.5. Comparison of Food Security Status Among Syrian and Iraqi

The table 5.27 below shows food security status among Syrian and Iraqi refugees. The results indicate that Iraqi refugees were food secure more than Syrian refugees at three domains and the total level. Firstly, there are statistically significant differences among Syrian and Iraqi refugees at anxiety and uncertainty domain ($p < 0.05$). Similarly, insufficient quality of Iraqi was greater than Syrian. There are statistically significant differences among Syrian and Iraqi refugees ($p < 0.05$). With regard to the third domain, there are statistically significant differences among Syrian and Iraqi refugees at insufficient food domain ($p < 0.05$). Finally, food security of Iraqi at total level was greater than Syrian. There are statistically significant differences among Syrian and Iraqi refugees at total level ($p < 0.05$).

Table 5. 27. Food security status of refugees among dimensions

| Domain | Food secure | | | | P-value |
|-------------------------|-------------|-----------|-------|-----------|---------|
| | Syrian | | Iraqi | | |
| | Mean | Std. Dev. | Mean | Std. Dev. | |
| Anxiety and uncertainty | 0.41 | 0.49 | 0.26 | 0.44 | 0.01* |
| Insufficient quality | 0.44 | 0.50 | 0.59 | 0.49 | 0.02** |
| Insufficient food | 0.43 | 0.50 | 0.68 | 0.48 | 0.00* |
| Total | 0.30 | 0.46 | 0.47 | 0.50 | 0.01* |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

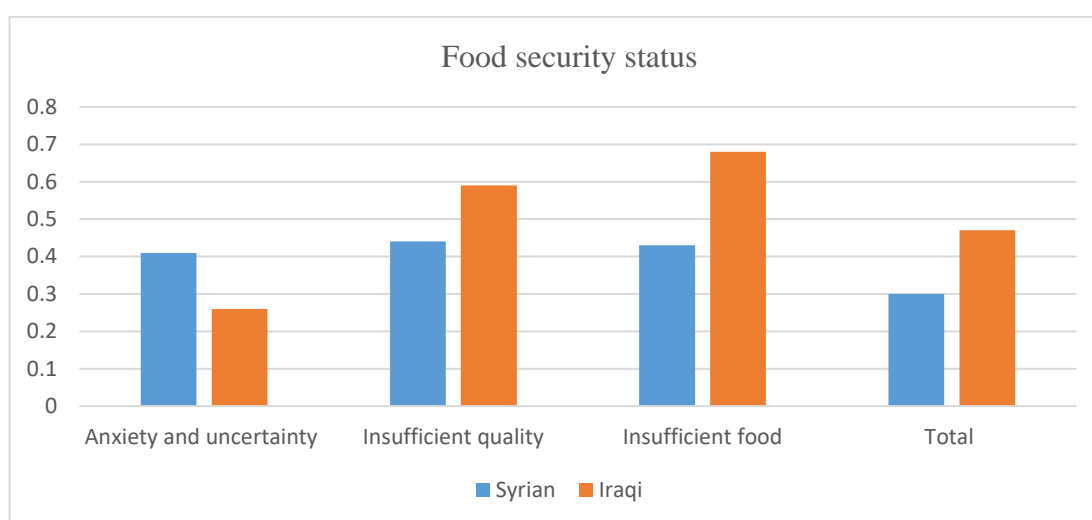


Figure 5. 2. Food security status among Syrian versus Iraqi

5.12. The Occurrence of Food Security and Socio-Demographic Variables

Here, food security was assessed at household level. Table 5.28 shows the differences in the food security status of the refugee households based on socio-demographic variables.

The results illustrate that nationality had significant impacts on food security status that Iraqi refugees were more likely to be food secure ($p < 0.05$). There were significant associations between food security status and gender. Thus, female refugee householders had higher food security than males. These results are inconsistent with the results of Smith et al. (2017). Marital status had not significant effect on food security status ($p > 0.10$). These results were in line with the study of Chery et al. (2004), while it was inconsistent with the results of Smith et al. (2017) where, married people experienced higher food security level. Household size had not significant impacts on food security status ($p > 0.10$). This result was inconsistent with Iorlamen

et al. (2014)' result. The older age group was less likely to be food secure ($p < 0.05$) and this result consistent with findings of Smith et al. (2017) and Omidvar et al. (2013) stated that where the probability of food insecurity increases with older people. The refugee households with higher education had higher food security than other households ($p < 0.05$). This result was supported by the studies of Hadley et al. (2007), Omidvar et al. (2013), Ifeoma and Agwa (2014). The refugee households who stay longer in Turkey had higher food security than other households ($p < 0.05$). This result may be explained by initial savings of refugee households. This result was different from the result of Hadley et al. (2007). Finally, the refugee households in Atakum district had higher food security than residents in Ilkadim and Canik districts ($p < 0.05$).

Therefore, the hypothesis H4 as there is a significant relationship between consumer variables and food security status can be accepted. Nationality, gender, age, education level, and length of stay in Samsun and district had statistically significant differences on food security status. Therefore, H4 as Socio-demographic variables have a significant influence on food security can be partly accepted.

Table 5. 28. The differences in food security status among socio-demographic variables

| Socio- demographic Variables | Sub- variable | Mean Score | Chi-square P-value |
|------------------------------|--------------------|------------|--------------------|
| Nationality | Syrian | 0.30 | 0.02* |
| | Iraqi | 0.47 | |
| Gender | Male | 0.36 | 0.07*** |
| | Female | 0.46 | |
| Marital status | Married | | 0.20 |
| | Single | | |
| | Divorced | | |
| Household size | Less 3 | 0.43 | 0.73 |
| | 3-4 | 0.44 | |
| | 5-6 | 0.40 | |
| | More 6 | 0.34 | |
| Age years | 18 – 25 Years | 0.49 | 0.05** |
| | 26 – 35 Years | 0.29 | |
| | 36 – 45 Years | 0.39 | |
| | More than 45 Years | 0.39 | |

| Socio- demographic Variables | Sub- variable | Mean Score | Chi-square P-value |
|------------------------------|----------------------|------------|--------------------|
| Education level | illiterate | 0.31 | 0.03** |
| | Primary | 0.15 | |
| | Secondary | 0.25 | |
| | High | 0.53 | |
| | Bachelor | 0.36 | |
| | Master and doctorate | 0.53 | |
| Length of stay in Turkey | Less than 3 years | 0.49 | 0.04** |
| | From 3 to 4 years | 0.42 | |
| | Above of 5 years | 0.30 | |
| District | Canik | 0.22 | 0.02** |
| | Atakum | 0.45 | |
| | Ilkadam | 0.39 | |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

5.13. The Occurrence of Food Security and Economic Variables

Table 5.29 shows the differences in food security status of the refugee households based on economic variables. Job status had significant effect on food security status. Thus, students had the best food security status followed by employed and unemployed refugee households ($p < 0.10$). This result is in line with the previous studies that employment increases the chances of being food secure (Smith et al., 2017; Titus and Adetokunbo, 2007). Household income level had significant effect on food security status. Thus, the households with higher income had higher food security than other households ($p < 0.01$). These results are in line with the previous studies that as income level increases the probability of experiencing food insecurity decreases (Ajani et al., 2006; Hadley et al., 2007; Smith et al., 2017). The household who gets cash assistance had higher food security than their counterparts ($p < 0.01$). This can be explained by that refugees who do not receive cash assistance enjoy good economic status and do not meet the specified criteria. Finally, the number of meals eaten in Turkey had significant effect on food security status. Thus, the refugees who eat three meals daily were likely to be food secure followed by two meals ($p < 0.01$). All these variables had significant differences except number of workers in household.

Job status, income level, cash assistance and number of meals eaten in Turkey had statistically significant differences on food security status. Therefore, the hypothesis H4b. in which economic variables have a significant influence on food security can be partly accepted.

Table 5. 29. The differences in food security status among economic variables

| Variables | Sub- variable | Mean Score | P-value |
|--------------------|---------------------|------------|---------|
| Job status | No work | 0.29 | 0.06*** |
| | I work | 0.39 | |
| | Student | 0.48 | |
| Number of workers | No person | 0.37 | 0.13 |
| | One person | 0.47 | |
| | Two persons | 0.29 | |
| | Three persons | 0.67 | |
| | More than 3 persons | 0.67 | |
| Income level | Less than 1500 TL | 0.10 | 0.00* |
| | 1500 -2000 TL | 0.26 | |
| | 2000-3000 TL | 0.42 | |
| | More than 3000 TL | 0.58 | |
| Cash assistance | Yes | 0.13 | 0.00* |
| | No | 0.45 | |
| N. Meals in Turkey | Two meals | 0.27 | 0.00* |
| | Three meals | 0.51 | |
| | Four meals | 0.41 | |

*, **, *** mean that significant difference at 1%, 5%, and 10%, respectively.

6. CONCLUSION AND RECOMMENDATION

6.1. Conclusion

In the last decade, Turkey has become pioneering country in the refugee field and today it has become the country with the highest number of refugees in the world. The number of refugees exceeded four million in Turkey (IOM, 2018). This study aimed to examine the food purchasing behaviours of Syrian and Iraqi refugees in Samsun province of Turkey. Refugee households such as with regards to the research of Syrian and Iraqi refugees' food purchasing behaviours covers three questions that are sought answers as follows: i) How much do the refugee households expend on five food categories weekly? This question was associated with the first objective of the study which is about estimating their food expenditure. (ii) How do the refugee households select store or how make purchasing decision? This question was associated with the second objective which is about determining their store choices. (iii) How is the refugee household's food security status. Food expenditure of Syrian and Iraqi households on food categories were analysed using multiple linear regressions. The current study included expenditure on five food categories such as vegetables, fruit, dairy products, meat products and cereals. This study is one of rare studies conducting on the refugee households' food purchasing patterns in Turkey.

The first aim of this study was to estimate the weekly food expenditure of the refugee households. The results of the study concluded that the refugee households with 5 members spent TL 311 per week for five food group. About 38% of refugee households' income goes to food expenditure. There were significant differences on both total food expenditure and each food groups between Syrian and Iraqi refugees. Due to better economic conditions, weekly food expenditures of Iraqi refugee households (325 TL) were higher than Syrian refugee households (296 TL). This is explained by those Iraqi refugees left their country voluntarily, whereas Syrian refugees were forced to leave their country. Except for fruits, the food expenditures of Iraqi refugee households were higher than Syrian refugee households. The shares of food groups in the food expenditure budget of the refugee households were as follows 28% on meat, 26% on vegetables, 18% on fruit, 14% on dairy products and, 13% on cereals. Despite of Syrian and Iraqi refugees descend from near areas and speak the same language, it determined that their food expenditure behaviours were statistically

different. Iraqi refugee households provide the most consideration to meat products, whereas Syrians provide more consideration to vegetables products.

The second aim was to identify the factors influencing the food expenditure of the refugee households, some variables were added in the models based on reviewed literature. Multiple linear regression was employed to examine the effects of variables on the weekly food expenditure of the refugee households. The results of multiple linear regression revealed that 5 variables had statistically significant impacts on the food expenditure of the refugee households. Socio-demographic variables affecting statistically food expenditures of the refugees were household size and length of stay in Samsun province. Economic variables affecting statistically food expenditures of the refugees were only level of income. Behavioural variables affecting statistically food expenditures of the refugees were purchasing out of season and wasted amount.

The third aim was to investigate the refugee's attitudes towards origin of the product. Three main cultural factors are used to investigate the impact of cultural factors on the food buying behaviour of refugee households. This study concluded also that Syrian refugees prefer to buy homeland products, whereas Iraqi refugees preferred the Turkish products.

With regards to the fourth aim or store choice of food categories, this study is considered as one of pioneering and important studies in both the store choice and refugees' fields. This study aims to investigate the different factors influencing the refugee households' preferences on the points of food retail purchases. The results concluded that the store choices of the refugee households were determined by seven factors as price, product characteristics healthy conditions, culture and habits, place and facilities, characteristics of staff, and store ownership. The results reported that price and product were the most important attributes.

Consumers' preferences on the points of food purchases pertain also to food categories purchased. Local markets (pazar or neighborhood markets) seemed to be the most preferred choice for fresh vegetables and fruit, whereas the supermarket was the most preferred choice for meat and dairy products. Markets (bakkals) were the best choice of cereals products. The findings concluded that each point of food sale was preferred for specific food categories by refugee households.

This research concluded also that the differences in point of purchase choice were associated with respondents' characteristics and food categories. The socio-demographic variables such as nationality, gender, marital status, age, and district had statistically significant impacts on the store choice at least for two food categories. Economic variables as number of workers and income level had significant impacts on the store choice at least for two food categories. Behavioral factors as buying off-season and payment method had significant impacts on the store choice at least for two food categories. The level of education, buyer, and listing food needs before shopping had significant differences for one food category.

The last aim was to estimate the food security status of the refugees. With respect to food security status of refugee households, three main domains were used to assess food security status among refugees in Samsun, Turkey. The results of study concluded that level of food security decreases through moving from indicators into domain. The level of food security decreases when moving to the next domain. Thus, 67.3% of the refugee households experienced food secure through the first domain, 52.2% of the refugee households experienced food secure through the second domain, 56.6% of the refugee households experienced food secure through the third domain, and 39.7% of the refugee households experienced food secure through the total food security. On three domains (anxiety and uncertainty, insufficient quality, and insufficient food) of food security status, Syrian refugees were worse than Iraqi refugees. A large number of Iraqis have another source of income such as retirement salary from their homeland countries.

Several socio-demographic variables such as nationality, age, level of education, length of stay in Turkey, and district had significant effects on the food security status of the refugee households. Also, economic variables such as job status and level of income had also significant effects on the food security status of the refugee households. This research concluded also that the food security levels of the refugee households decrease as refugees' residence time increases. This situation can be explained by the deterioration of the economic situation of the refugees. However, the rising inflation level in Turkey had a negative impact on the food security status of the refugee households.

In conclusion, the refugee households' purchasing behavior is still an important issue as a result of the increasing refugee population in the world. Even though the

study sample represents refugees, the overall results of the analysis were consistent with other studies conducted on other consumers. Overall, the findings have implications for food retailers, refugees, and agencies working in the refugee field.

6.2. Recommendations

Four levels of recommendations for food retailers, refugees, governmental, and non-governmental organizations could be derived from the conclusions.

6.2.1. Recommendations for Food Retailers

Firstly, we provide recommendations for food retailers to improve marketing strategies and to attract more shoppers. Moreover, the retail sector management in Turkey should take the refugees' preferences into account to fulfill their desires and needs. Besides, the store formats should explore refugees' attitudes to satisfy them and to increase the quantity of selling foods. These recommendations were given for food retailers on the food behaviors of vegetables, fruit, dairy products, meat products, and cereals to Syrian and Iraqi refugees.

With regards to store formats, green grocery formats were not preferred by refugees for any food categories due to intensive competition by other retailers such as supermarkets. Therefore, it is important to green grocery retailers to improve their store attributes. The local markets as the main point of purchase for fruit and vegetables should be organized efficiently for being more accessible to the refugee households. These retailers should increase consumers' perceptions towards healthy products. Moreover, the refugee households should focus on the attribute of food healthy more than the attributes of price and product. Finally, the companies should intensify their efforts to better assess the buying behaviors of refugee households. Thus, the most important attributes for the refugee households were determined as price, products characteristics, and healthy conditions.

In terms of price, the retailers could increase their food sales and attract more shoppers by following strategies as follows:

- Availability of various price ranges is attractive factor for consumers and the food retailers may follow appropriate promotional campaigns to attract more refugees.
- Providing gifts with products encourages consumers to buy products.

- Developing marketing strategies such as suitable price and campaigns that are identical for both Turkish citizens and Arab refugees as a large group in the urban population of Samsun province.

In terms of product characteristics, retailers could increase food sales by different strategies as follows:

- Retailers should devote their attention to product taste. Because taste of product was important factor to consumer in store choice.
- A wide variety of food products in store may create a new chance to attract new refugees.
- Retailers should sell good quality food products because quality attribute plays important role in store choice.

In terms of healthy conditions, retailers could increase food sales by different strategies as follows:

- Retailer should devote attention to food safety because food safety was important factor for refugees.
- Safety products were another healthy condition of products. Turkish retailers should put healthy products on their shelves.

In terms of refugees' habits and cultures, retailers could increase food sales by different strategies as follows:

- Food retailers should display an Arabic statement on the packaging or on the labels. This procedure could encourage Arab refugees to buy those products.
- The food retailers should put some products demanded especially by refugee households such as tall rice on their market shelves.

In terms of characteristics of staff, retailers could increase food sales by different strategies such as:

- Respect and kindness of staff were influential factors in store choice. Therefore, stores staffs should be friendlier and had good relationships with consumers. Staffs should be trained on these topics.
- Syrian and iraqi refugees speak arabic language. Therefore, employee behaviour with consumers and learning some basic arabic words may attract these consumers.

The current study also provides recommendations associated with consumer characteristics. Thanks to these recommendations, the food retailers may understand better the needs and behaviors of their consumers. The research results highlighted that the variables of socio-demographic (nationality, gender, marital status, age, and district), economic (employed household members and income level), and behavioral (buying off-season and payment way) influenced the refugees' store choices at least for two food categories. Therefore, need for segmentation according to differences in consumers during choosing point of purchase. Food retailers in Turkey should develop specific strategies enable them targeting all categories. Food retailers should cater to the different aspirations and desires of consumers.

6.2.2. Recommendations for Syrian and Iraqi Refugee Households

The share of food expenditure in the budget refugee households was high. Therefore, the refugee households should increase their incomes and decrease the share of food expenditures in their budgets. The refugees should pay attention to expend more on fruit and cereals to decrease the expenditure of meat products.

With regards to store choice, the research concluded that seven store attributes were important to choose the stores. The attributes were price, product, and healthy conditions of products. Refugee households should pay attention to healthy products such as food safety and organic products more than price and characteristics of products. This procedure may improve the refugee's health and protect the environment.

6.2.3. Recommendations for Governmental Organizations on Food Security

The refugee households in Samsun province exhibit significant levels of food insecurity. It is seemed to be important to review and re-evaluate the Turkish policies associated to refugees in Turkey. There is a need to assess the food security status of refugees in Turkey to improve the prevalence of food security among the refugee households. There have been significant differences among refugees about the levels of food security. The policies should be established based on understanding the factors influencing their food security situations. Therefore, the Turkish governmental organizations responsible for food security filed should focus on the economic status of refugees' households especially on the most vulnerable. This procedure can improve food security status and decrease the food insecurity status among refugees.

6.2.4. Recommendations for Global Organizations on Food Security

∩ Therefore, there is need to improve the prevalence of food security. The policies in this field should be built by understanding the factors influencing food security. The refugee households should be supported by international agencies such as international organization of immigration (IOM), food and agriculture organization (FAO), world food program (WFP), and United Nations (UN) by providing food vouchers. The global non-governmental organizations working in the food security filed should focus on the economic status of refugees' households especially the most vulnerable. Therefore, these agencies should provide especially in-kind assistance to the refugee households by taking some eligibility criteria into account such as nationality, gender, age, district and employment. This procedure can improve food security status and decrease the food insecurity status among refugees. Likewise, the current study recommends by applying specific programs that could alleviate food insecurity among refugees. The findings suggest that no significant impacts of cash assistances on food security. This leads to that this assistance was either under limit or was used for other goals. This study recommended that institutional food assistances should be directed especially to the refugee households who are Syrian, male, older, unemployed and residing in Canik district. Finally, the current study recommends by applying a new criterion to assess the refugee's status.

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Appendix

English Questionnaire

FOOD PURCHASING BEHAVIOURS OF THE REFUGEES: A CASE STUDY OF SAMSUN PROVINCE, TURKEY

The researcher is preparing a doctoral research entitled: Determination of food purchasing behavior of Syrians and Iraqis refugees in Samsun / Turkey. The study aims to identify the factors affecting the food purchasing behavior of Syrian and Iraqi refugees in Samsun / Turkey.

Researcher Name: Abdulrazak ghazal

Questionnaire number:

Area of residence:

Date of questionnaire:

We thank you for your efforts and good cooperation

SECTION ONE: PROFILE OF REFUGEES

A. Socio-Demographic Variables

A1. Nationality 1). *Syrian* 2). *Iraqi*

A2. Gender: 1). *Male* 2). *Female*

A3. Marital status? 1). *Single* 2). *Married* 3). *Divorced*

A4. Household size?.....

A5. Age:

A6. Level of Education: 1). *Illiterate* 2). *Primary school* 3). *Secondary school* 4). *High school* 5). *University (Bachelor)* 6). *Master or Doctorate*

A7. Length of stay in Turkey: *years ago.*

A8. District: 1). *Canik* 2). *Atakum* 3). *Ilkadm*

B. Economic Variables

B1. Job Status: 1). *Unemployed* 2). *Employed* 3). *Student*

B2. Number of Workers in Household: 1) *none* 2) *1 person* 3) *2 person* 4) *3 persons*

B3. Household monthly Income:*TL*

B4. Are your family getting any cash social assistance?*TL/month or year*

C. Behavioural Variables

C1. Number of Meals in Turkey: 1). *Two meals* 3). *Three meals* 3). *Four meals*

C2. Buyer in Household: 1). *father or mother* 2). *Father and mother* 3). *Children*

C3. How do you purchase off-season food products? 1). *Never* 2). *Rarely* 3). *Very rarely*

4). *Occasionally* 5). *Frequently* 6). *Always*

C4. How often do you list your food purchases? 1). *Never* 2). *Rarely* 3). *Very Rarely*

4). *Occasionally* 5). *Frequently* 6). *Always*

C5. Payment Way: 1). *Cash* 2). *ATM card*

C6. Amount of food wasted:

D. Cultural Variables

Please state the opinion by using the scale from the following statement given below.

Please mark a () in a appropriate column, the reason for which you have selecting a particular retail outlet

‘5’ if you **Strongly Agree** with the statement

‘4’ if you **Agree** with the statement

‘3’ if you have **Neither Disagree nor Agree** about the Statement

‘2’ if you **DisAgree** with the statement

‘1’ if you **Strongly DisAgree** with the statement.

| How the cultural factors influence food purchasing behaviour of homeland and domestic products | 1. SD | 2. D | 3. NA/DA | 4. A | 5. SA |
|---|--------------|-------------|-----------------|-------------|--------------|
| D1. Culture | | | | | |
| I prefer Arabs food more than Turkish food | | | | | |
| My culture influences my decision to buy food | | | | | |
| How much do you feel you have in common with Turkish culture | | | | | |
| I have changed my food consumption habits | | | | | |
| D2. Sub-culture | | | | | |
| How well do you speak turkish? | | | | | |
| Does your religious effects on your food consumption? | | | | | |
| Does your region effects on your food consumption? | | | | | |
| How often do you watch Arab television? | | | | | |
| How often do you watch Turkish television? | | | | | |
| How often do you spend your social/time with Turkish people? | | | | | |
| D3. Social class | | | | | |
| Your occupation effect on your food consumption | | | | | |
| Your income effect on your food consumption | | | | | |
| Your education level effect on your food consumption | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| Is there difference for you among market types? | | | | | |
| Your friends/family's opinions influence your buying decision? | | | | | |

D4. Attitudes Towards Origin of Products:

| | 1. SD | 2. D | 3. NA/DA | 4. A | 5. SA |
|---|-------|------|----------|------|-------|
| 1. I prefer Arabs food more than Turkish food | | | | | |
| 2. Origin of Product | | | | | |
| 3. Turkish products | | | | | |

SECTION TWO: HOUSEHOLD FOOD EXPENDITURE

| Food group | Food Expenditure Weekly | Frequency of purchase 1.time/daily 2.time/weekly 3.time monthly | Point of purchase 1.Supermarket 2.Market 3.Grocery 4.Local market | Store ownership 1.Turkish 2.Syrian 3.Iraqi |
|------------------|----------------------------|--|---|---|
| Vegetables | | | | |
| Fruit | | | | |
| Dairy products | | | | |
| Meat products | | | | |
| Cereals products | | | | |
| Total budget | | | | |

SECTION 3: STORE CHOICE ATTRIBUTES

(Please, give your response by putting a tick (√) on an appropriate box)

| is important for me to buy food products | 1. SD | 2. D | 3. NA/DA | 4. A | 5. SA |
|--|-------|------|----------|------|-------|
| 1. Factor: product | | | | | |
| Product quality | | | | | |
| Availability of various products | | | | | |
| Product taste | | | | | |
| Product appearance | | | | | |
| 2. Factor: price | | | | | |
| Price suitability | | | | | |
| Gifts | | | | | |
| Promotion | | | | | |
| 3. Factor: place and facilities | | | | | |
| Distance | | | | | |
| Availability of products in all seasons | | | | | |
| Easy access to stores | | | | | |
| Bulk shopping | | | | | |
| Transportation service | | | | | |
| Parking facilities | | | | | |
| 4. Factor: healthy conditions | | | | | |
| Product nutritional value | | | | | |
| Organic product | | | | | |
| Food safety | | | | | |
| Pesticide residue | | | | | |
| Hygiene of the store | | | | | |
| GMO or hormone product | | | | | |
| 5. Factor: Habit and culture | | | | | |
| Product origin | | | | | |
| Homeland products | | | | | |
| Turkish products | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| Family effects | | | | | |
| Friends effects | | | | | |
| 6. Factor: characteristics related to staff | | | | | |
| Knowing store owner | | | | | |
| Employee behavior | | | | | |
| Their languages | | | | | |
| Respect and kindness | | | | | |

SECTION 4: SORT THE PLACES OF SALE ACCORDING TO THEIR IMPORTANCE IN TERMS OF THE FOLLOWING POINTS

(Please, give your response by putting a tick (√) on an appropriate box)

| | 1-Market | 2-Grocer | 3-No difference | 4-Street market | 5-Super market |
|--|-----------------|-----------------|------------------------|------------------------|-----------------------|
| What kind of stores do you prefer in terms of price ? | | | | | |
| What kind of shops do you prefer in terms of fresh product ? | | | | | |
| What kind of stores do you prefer in terms of product quality ? | | | | | |
| What kind of stores do you prefer in terms of product variety ? | | | | | |
| What kind of stores do you prefer in terms of location ? | | | | | |
| What kind of stores do you prefer in terms of availability of quantity and appropriate size ? | | | | | |
| What kind of stores do you prefer in terms of having a health product ? | | | | | |
| What kind of shops do you prefer in terms of buying habits ? | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| What kind of shops do you prefer in terms of availability of offers? | | | | | |
| What kind of stores do you prefer in terms of the owner of the store? | | | | | |
| What kind of stores do you prefer in terms of cleanliness of the store? | | | | | |

SECTION 5. FOOD SECURITY STATUS

| Statement | Food security status | |
|---|----------------------|---------------|
| | Food secure | Food insecure |
| The first domain: Anxiety and uncertainty about the household food supply | | |
| In the last year, did you worry that your household would not have enough food? | | |
| The second domain: Insufficient Quality | | |
| Does your household get a sufficient quality of food during the year? | | |
| In the last year, did you or any household member have not been able to eat the kinds of foods you preferred because the lack of resources? | | |
| In the last year, did you or any household member have to eat some foods that really did not want to eat because the lack of resources? | | |
| The third domain: Insufficient food | | |
| Does your household get available or sufficient food quantity during the year? | | |
| Do you have enough money to buy sufficient food or to eat desired meal? | | |
| In the last year, were you or any household member go to sleep hungry because no food to eat? | | |
| In the last year, did you or any household member have no way to get food or remained without eating a whole a day and night? | | |
| Do you have easy access to food market? | | |

THANK YOU FOR YOUR TIME

APPENDIX 2
QUESTIONNAIRE BY ARABIC LANGUAGE

Arabic Questionnaire

اون دوکوز مایس /سامسون

استبيان

يقوم الباحث بإعداد بحث دكتوراه بعنوان: تحديد سلوك استهلاك الأغذية للسوريين والعراقيين الموجودين في مدينة سامسون/تركيا. وتهدف الدراسة الى تحديد العوامل المؤثرة في تحديد السلوك الشرائي للمهاجرين السوريين والعراقيين في مدينة سامسون/تركيا.

نشكر لكم جهودكم وحسن تعاونكم

اسم الباحث: جامعة اون دوکوز مایس

رقم الاستبيان: /

منطقة الإقامة:

تاريخ الاستبيان:

القسم الأول: الخصائص المتعددة للمستهلكين

أ. الخصائص الاجتماعية والديموغرافية

- أ- ماهي جنسيتك: 1-سوري 2-عراقي
- ب- ما هو جنسك: 1- ذكر 2- انثى
- ت- الوضع العائلي: 1- متزوج 2- أعزب 3- منفصل
- ث- عدد أفراد العائلة مع الاب والام:
- ج- كم العمر:سنة
- ح- ما هو المستوى التعليمي لديكم: 1- لا اعرف القراءة والكتابة 2- شهادة ابتدائية 3- شهادة متوسطة 4- شهادة سادس اعدادي 5- شهادة جامعية 6- دراسات عليا
- خ- عدد سنوات الإقامة في تركيا؟سنة
- د- في أي منطقة تعيش في سامسون؟ 1- جانيك 2- أتاكوم 3- الكادم
- ب. الخصائص والعوامل الاقتصادية
- أ- ما هو عملك الحالي؟ 1- لا اعمل 2- اعمل 3- طالب
- ب- كم عدد الأشخاص الذين يعملون بين أفراد عائلتك؟ 1- ولا شخص 2- 1 شخص 3- 2 شخصان 4- 3 اشخاص
- ت- ما هو الدخل الإجمالي لعائلتك؟ ليرة تركية
- ث- هل تحصل عائلتك على أي مساعدة نقدية؟ 1- نعم 2- لا

ج. الخصائص والعوامل السلوكية

- أ- كم عدد وجبات الطعام في تركيا؟ 1- 2 وجبتان 2- 3 وجبات 3- 4 وجبات
- ب- من هو الشخص المسؤول عن الشراء؟ 1- الاب أو الام 2- الاب والام 3- الأطفال
- ت- هل تقوم بشراء المنتجات خارج موسمها؟ 1- ابدأ 2- نادراً جداً 3- نادراً 4- من حين لآخر 5- في كثير من الأحيان 6- دائماً
- ث- هل تجهز قائمة بالمشتريات؟ 1- ابدأ 2- نادراً جداً 3- نادراً 4- من حين لآخر 5- في كثير من الأحيان 6- دائماً
- ج- ماهي طريقة الدفع؟ 1- نقدي 2- بطاقة ذكية
- ح- كميات الطعام المهدورة: ليرة تركية

ح. الخصائص والعوامل الثقافية

(الرجاء اختيار إجابة واحدة فقط من بين الإجابات الخمسة)

| 5 | 4 | 3 | 2 | 1 | |
|------------|-------|------------------------|-----------|----------------|---|
| موافق بشدة | موافق | لست موافق او غير موافق | غير موافق | غير موافق بشدة | تأثير العوامل الثقافية على سلوك شراء الأغذية |
| | | | | | 1- الثقافة العامة |
| | | | | | انا أفضل الأغذية العربية على الأغذية التركية |
| | | | | | ان ثقافتني تؤثر على شراء الاغذية |
| | | | | | انا اشعر ان عاداتي أصبحت قريبة من العادات التركية |
| | | | | | لقد تغير سلوكي وعاداتي في شراء الاغذية |
| | | | | | 2- الثقافة الخاصة |
| | | | | | اتحدث اللغة التركية ولا توجد مشكلة في اللغة |
| | | | | | ان معتقداتك الدينية تؤثر في شراء واستهلاك الاغذية |
| | | | | | ان منطقتك التي تنحدر منها تؤثر في شراء واستهلاك الاغذية |
| | | | | | انا اشاهد التلفاز والقنوات العربية |
| | | | | | انا اشاهد التلفاز والقنوات التركية |
| | | | | | انا اقضي بعض الوقت مع الاتراك |
| | | | | | 3- الفئة الاجتماعية |
| | | | | | ان مهنتي تؤثر على شراء واستهلاك الاغذية |
| | | | | | ان تغير دخلي يؤثر على شراء واستهلاك الاغذية |
| | | | | | ان مستواي التعليمي يؤثر على شراء واستهلاك الاغذية |
| | | | | | انا اعتبر وجود فروقات بين أنواع المتاجر التي تباع الاغذية |
| | | | | | ان لاصدقائك او افراد اسرتك تأثير على قرار على شراء واستهلاك الاغذية |

ح.1. مواقف المستهلكين تجاه أصل المنتج:

| | | | | | |
|------------|-------|------------------------|-----------|----------------|--|
| 5 | 4 | 3 | 2 | 1 | تأثير العوامل الثقافية على سلوك المستهلكين تجاه أصل المنتج |
| موافق بشدة | موافق | لست موافق أو غير موافق | غير موافق | غير موافق بشدة | |
| | | | | | انا أفضل الأغذية العربية على الأغذية التركية |
| | | | | | يعتبر أصل المنتج مهم |
| | | | | | أفضل المنتجات التركية |

القسم الثاني: مقدار الانفاق على الغذاء وسلوك شراء الأغذية (اسبوعيا)

| صاحب المتجر | نقطة البيع | تردد الشراء | الانفاق/ليرة | نوع الغذاء |
|---------------------------|--|---|--------------|---|
| 1-تركي 2-سوري أو عراقي | 1-سوبر ماركت 2-ماركت 3-بائع الخضار 4-بازار الحي | 1-يومي 2-كل 3ايام 3- اسبوعيا 4-شهر | | |
| | | | | الخضروات |
| | | | | الفواكه |
| | | | | مشتقات الألبان الالبان- الحليب- الاجبان |
| | | | | منتجات اللحوم لحوم حمراء- دجاج- أسماك |
| | | | | بقوليات أرز- عدس- برغل- حمص |
| | | | | الميزانية الإجمالية |

القسم الثالث: ماهى سمات نقاط البيع المؤثرة على اختيارها؟

(الرجاء اختيار إجابة واحدة فقط من بين الإجابات الخمسة)

| 5 موافق بشدة | 4 موافق | لست موافق أو غير موافق | 2 غير موافق | 1 غير موافق بشدة | ما هو العامل المهم بالنسبة لي عند اختيار نقطة البيع |
|--------------|---------|------------------------|-------------|------------------|---|
| | | | | | العامل 1: المنتج |
| | | | | | جودة المنتج |
| | | | | | توافر المنتجات المختلفة |
| | | | | | طعم المنتج |
| | | | | | مظهر المنتج |
| | | | | | العامل 2: السعر |
| | | | | | ملاءمة السعر |
| | | | | | الهدايا |
| | | | | | توفر عروض على الأسعار |
| | | | | | العامل 3: المكان والمرافق |
| | | | | | المسافة أو البعد عن المحل |
| | | | | | توافر المنتجات في جميع الفصول |
| | | | | | سهولة الوصول إلى المتاجر |
| | | | | | التسوق بالجملة |
| | | | | | خدمة النقل |
| | | | | | وجود مواقف للسيارات |
| | | | | | العامل 4: الظروف الصحية |
| | | | | | القيمة الغذائية للمنتج |
| | | | | | منتج عضوي |
| | | | | | سلامة الغذاء |
| | | | | | بقايا المبيدات |
| | | | | | النظافة في المتجر |
| | | | | | المنتجات المعدلة وراثيا أو المنتج الهرموني |

| | | | | | |
|--|--|--|--|--|---|
| | | | | | العامل 5: العادة والثقافة |
| | | | | | أصل المنتج |
| | | | | | منتجات البلد الام |
| | | | | | المنتجات التركيبية |
| | | | | | تأثير الأسرة |
| | | | | | تأثير الأصدقاء |
| | | | | | العامل 6: الخصائص المتعلقة بالموظفين |
| | | | | | معرفة صاحب المتجر |
| | | | | | سلوك الموظف |
| | | | | | اللغة التي يتحدث بها |
| | | | | | الاحترام والمعاملة والتصرفات |

القسم الرابع: رتب أماكن البيع حسب أهميتها من حيث النقاط التالية

(الرجاء اختيار إجابة واحدة فقط من بين الإجابات الخمسة)

| 5-السوبر ماركت BIM-A.101-ŞOK | 4-بازار الحي | 3-لا يوجد اختلاف | 2-بائع الخضار | 1-الماركت بقال سوري-عراقي-تركي | سمات المتجر |
|---------------------------------|--------------|------------------|---------------|-----------------------------------|--|
| | | | | | ج11- أي نوع من المحلات تفضل من حيث السعر |
| | | | | | ج12- أي نوع من المحلات تفضل من حيث المنتج الطازج |
| | | | | | ج13- أي نوع من المحلات تفضل من حيث جودة المنتج |
| | | | | | ج14- أي نوع من المحلات تفضل من حيث تنوع المنتجات |
| | | | | | ج15- أي نوع من المحلات تفضل من حيث الموقع |
| | | | | | ج16- أي نوع من المحلات تفضل من حيث توفر الكمية والحجم المناسب |
| | | | | | ج17- أي نوع من المحلات تفضل من حيث وجود المنتج الصحي |

| | | | | |
|--|--|--|--|--|
| | | | | ج18- أي نوع من المحلات تفضل من حيث عادات الشراء |
| | | | | ج19- أي نوع من المحلات تفضل من حيث توفر العروض |
| | | | | ج20- أي نوع من المحلات تفضل من حيث صاحب ملكية المتجر |
| | | | | ج21- أي نوع من المحلات تفضل من حيث نظافة المتجر |

القسم الخامس: تقييم وضع الامن الغذائي للأسرة

| لا | نعم | أبعاد الأمن الغذائي |
|---|-----|--|
| المجال الأول: القلق وعدم اليقين بشأن الإمدادات الغذائية للأسرة | | |
| | | في العام الماضي، هل كنت قلقا من أن أسرتك من الممكن ان لا تحصل على ما يكفي من الطعام؟ |
| المجال الثاني: جودة الغذاء | | |
| | | هل تحصل اسرتك على نوعية جيدة من الطعام خلال العام؟ |
| | | في العام الماضي، هل حصل ان لم تتمكن أنت أو أي فرد من أفراد الأسرة من تناول الأصناف المفضلة لديكم بسبب نقص الموارد لديكم؟ |
| | | في العام الماضي، هل حصل أنت أو أي فرد من أفراد الأسرة من تناول الأصناف التي لا ترغبون بها بسبب نقص الموارد لديكم؟ |
| المجال الثالث: عدم كفاية الغذاء | | |
| | | هل تحصل أسرتك على كمية كافية من الطعام خلال العام؟ |
| | | هل لديك ما يكفي من المال لشراء كميات كافية من الغذاء؟ |
| | | في العام الماضي، هل حصل ان نمت أنت أو أي فرد من أفراد أسرتك وأنت جائع لعدم وجود طعام تأكله؟ |
| | | في العام الماضي، هل حصل أنت أو أي فرد من أفراد لم تتمكنوا من إيجاد طريقة للحصول على الطعام؟ |
| | | خلال العام الماضي هل كان من السهل الوصول إلى أسواق المواد الغذائية؟ |

شكرا جزيلاً لحضراتكم

Temporary Protection Identity Document

| | | |
|---|---|--|
| <p>T.C. İÇİŞLERİ BAKANLIĞI ANKARA VALİLİĞİ</p> <p>GEÇİCİ KORUNMA KİMLİK BELGESİ</p> <p>بِلْغَة كِيْمَلِيَّة مَرْتَبَة</p> |  | <p style="text-align: center; font-size: 2em; opacity: 0.5; transform: rotate(-15deg);">ÖRNEKTİR</p> <p>ANKARA İÇişleri Müdürlüğüne teslim edilen bu belge sadece ANKARA İÇİŞİLERİ bünyesinde geçerlidir. Belgenin kayıtlı olduğu bölge dışında kullanılması halinde ilgililerle görüşme yapılması gerekmektedir.</p> <p>هذه الوثيقة التي تمكنت من اقتنائها نتيجة إقرار الهجرة إلى المملكة التركية هي فقط صالحة في إطار إقليم أنقرة التابع لـ إدارة أمن الدولة في أنقرة. لا يمكن استخدامها في مناطق أو تقاطع على هذه الوثيقة بموجب التسجيل في الجهة المختصة لها.</p> |
| <p>Yabancı Kimlik No / رقم الهوية الأجنبية: _____</p> | | |
| Adı / اسم: | _____ | |
| Soyadı / الفاميليا: | _____ | |
| Doğum Tarihi / تاريخ الميلاد: | _____ | |
| Doğum Yeri / مكان الميلاد: | _____ | |
| Milliyet / جنسية: | _____ | |
| Yabancı Kimlik No / رقم الهوية الأجنبية: | _____ | |
| Kimlik No / رقم الهوية: | _____ | |
| Kimlik Türü / نوع الوثيقة: | _____ | |
| <p>ANKARA VALİLİĞİ İÇİŞLERİ MÜDÜRLÜĞÜ</p> <p>ANKARA VALIYLIĞI İÇİŞLERİ MÜDÜRLÜĞÜ</p> | | |

Ethical Decision



ONDOKUZ MAYIS ÜNİVERSİTESİ SOSYAL VE BEŞERİ BİLİMLER ETİK KURUL KARARLARI

| KARAR TARİHİ | TOPLANTI SAYISI | KARAR SAYISI |
|--------------|-----------------|--------------|
| 20.12.2019 | 12 | 2019/481 |

KARAR NO: 2019 – 481
Üniversitemiz Fen Bilimler Enstitüsü Doktora öğrencisi Abdulrazak GHAZAL'ın Prof. Dr. Mehmet BOZOĞLU danışmanlığında "Samsun İlindeki Iraklı ve Suriyeli Sığınmacıların (Mültecilerin) Gıda Satın Alma Davranışlarının Belirlenmesi" isimli doktora tezine ilişkin anket ve mülakat çalışmalarını içeren 45022 sayılı dilekçesi okunarak görüşüldü.

Üniversitemiz Fen Bilimler Enstitüsü Doktora öğrencisi Abdulrazak GHAZAL'ın Prof. Dr. Mehmet BOZOĞLU danışmanlığında "Samsun İlindeki Iraklı ve Suriyeli Sığınmacıların (Mültecilerin) Gıda Satın Alma Davranışlarının Belirlenmesi" isimli doktora tezine ilişkin anket ve mülakat çalışmalarının kabulüne oy birliği ile karar verildi.

CURRICULUM VITEA



Personal Information:

- **First Name** : Abdulrazak
- **Surname** : Ghazal
- **D.O.B.** : 6th December 1984 Syria
- **Nationality** : Syrian
- **Gender** : Male
- **Languages:**
 - Arabic - Native
 - English- Very good
 - Turkish- very good

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Academic Qualifications:

High school : Albara High School (GPA: 89.00)

Bachelor : Agricultural Economics, Aleppo University (GPA: 72.04)

Master Degree: Agribusiness and Agricultural Economics, University of Jordan
(GPA: 3.81)

Ph.D. : Agricultural Economics, Ondokuz Mayıs University (GPA: 3.95)

Work Experience

• **2008-2009: Engineer (Agronomist) in the Ministry of Agriculture, Idleb (Syria)**

- Developing plans and programmers for farmers.
- Conducting economic studies for projects.
- Collect and analysis data.

• **2009-2011: Teacher Assistant (Lecturer), Damascus University (Syria)**

- Food security
- Agricultural marketing
- Statistics