

**Prioritizing Market Segmentation Categories  
for Assessing Online Consumer Behavior in  
North Cyprus**

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## ABSTRACT

Consumer behaviour has always been a critical component of marketing activities. Consumers' behaviour varies based on various aspects of their life. One of the oldest methods used by marketers to understand their consumers' better, is to divide them into different segments. Technology and the Internet are changing all the traditional ways of doing business and we need to update our knowledge regarding consumer behaviour in this new business environment. Managers also must try to adapt to these changes to stay profitable. Therefore, this study aims to prioritize market segmentation categories when assessing consumers' online buying behaviour using Analytical Hierarchy Process (AHP).

The data were collected through a standard AHP questionnaire from 71 individuals who lived in North Cyprus. Findings demonstrated that age, gender, and marital status are the most critical factors in determining online consumer behaviour. On the other hand, group influence, adaptability, and brand loyalty were found to be the least important factors that can stimulate consumers to shop online. TRNC managers are encouraged to target their consumers based on the categories essential in assessing consumers' online behaviour since running marketing campaigns and advertising costs money and time for companies. They can also benefit from the results of this study and apply more target-oriented and productive segmentation strategies to enhance their company's performance.

**Keywords:** Analytic Hierarchy Process AHP, Market Segmentation Categories, Consumer Behaviour, North Cyprus.

## ÖZ

Tüketici davranışı her zaman pazarlama faaliyetlerinin kritik bir bileşeni olmuştur. Tüketicilerin davranışları hayatlarının çeşitli yönlerine göre değişir. Pazarlamacıların tüketicilerini daha iyi anlamak için kullandıkları en eski yöntemlerden biri, onları farklı segmentlere ayırmaktır. Teknoloji ve İnternet, iş yapmanın tüm geleneksel yollarını değiştiriyor ve bu yeni iş ortamında tüketici davranışlarına ilişkin bilgilerimizi güncellememiz gerekiyor. Yöneticiler ayrıca kârlı kalmak için bu değişikliklere uyum sağlamaya çalışmalıdır. Bu nedenle, bu çalışma, Analitik Hiyerarşi analizi (AHP) kullanarak tüketicilerin çevrimiçi satın alma davranışlarını değerlendirirken pazar bölümlendirme kategorilerine öncelik vermeyi amaçlamaktadır.

Veriler, Kuzey Kıbrıs'ta yaşayan 71 kişiden standart bir AHP anketi aracılığıyla toplanmıştır. Bulgular, çevrimiçi tüketici davranışını belirlemede yaş, cinsiyet ve medeni durumun en kritik faktörler olduğunu göstermiştir. Öte yandan, grup etkisi, uyarlanabilirlik ve marka sadakati, tüketicileri çevrimiçi alışveriş yapmaya teşvik edebilecek en az önemli faktörler olarak bulundu. Kuzey Kıbrıs'taki yöneticiler, pazarlama kampanyaları ve reklamlar yürütmek şirketler için para ve zaman gerektirdiğinden, tüketicilerin çevrimiçi davranışlarını değerlendirmede temel olan kategorilere dayalı olarak tüketicilerini hedeflemeye teşvik edilir.

**Anahtar kelimeler:** Analitik Hiyerarşi Süreci AHP; Pazar Bölümlendirme Kategorileri, Tüketici Davranışı, Kuzey Kıbrıs.

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# TABLE OF CONTENTS

ABSTRACT.....	iii
ÖZ .....	iv
ACKNOWLEDGMENT.....	v
LIST OF TABLES .....	ix
LIST OF FIGURES.....	x
LIST OF ABBREVIATIONS .....	xi
1 INTRODUCTION .....	1
1.1 Introduction .....	1
1.2 Importance of the Study .....	3
1.3 Aim and Objectives .....	3
1.4 Research Questions .....	3
1.5 Definition of Terms .....	4
1.6 Structure of Thesis .....	4
2 LITERATURE REVIEW.....	5
2.1 Introduction .....	5
2.2 Individual Determinants .....	7
2.2.1 Demographic .....	7
2.2.2 Psychographic.....	10
2.2.3 Personality .....	12
2.2.4 Lifestyle .....	15
2.3 Environmental Influences .....	16
2.3.1 Socioeconomic.....	17
2.3.2 Cultural .....	18

2.3.3 Geographic.....	20
2.3.4 Use-Situation .....	21
3 RESEARCH METHODOLOGY .....	24
3.1 Variables Used in the Study .....	24
3.2 Analytic Hierarchy Process (AHP) .....	26
3.3 Hierarchal Structure Development.....	32
3.4 Sample Design and Questionnaire Development.....	34
4 RESULTS AND DISCUSSION .....	36
4.1 Demographic Profile of Respondents .....	36
4.2 Results Utilizing Manual Calculation .....	38
4.3 Results by Software.....	41
4.3.1 Comparing Factors in Level 2 .....	41
4.3.2 Comparing Factors in Level 3 .....	42
4.3.2.1 Comparing Individual Determinants.....	42
4.3.2.2 Comparing Environmental Influences .....	42
4.3.3 Comparing Factors in Level 4 .....	43
4.3.3.1 Comparing Demographic Factors .....	43
4.3.3.2 Comparing Psychographic Factors .....	43
4.3.3.3 Comparing Personality Factors .....	44
4.3.3.4 Comparing Lifestyle Factors.....	44
4.3.3.5 Comparing Socioeconomic Factors .....	45
4.3.3.6 Comparing Cultural Factors .....	46
4.3.3.7 Comparing Geographic Factors .....	46
4.3.3.8 Comparing Use-Situation Factors .....	47
4.3.4 Dynamic Sensitivity for Individual Determinants.....	47

4.3.5 Dynamic Sensitivity for Environmental Influences .....	48
4.3.6 Dynamic Sensitivity for All Factors .....	49
4.3.7 Local and Global Weight of All factors .....	49
5 CONCLUSION AND RECOMMENDATION .....	51
5.1 Introduction .....	51
5.2 Conclusion.....	51
5.3 Theoretical Implications.....	54
5.3 Practical Implications .....	55
5.4 Limitation and Recommendation for Future Studies .....	56
REFERENCES.....	57



## LIST OF TABLES

Table 3.1: Definition of Variabels Used.....	25
Table 3.2: A 9-Point Intensity of Relative Importance Scale .....	30
Table 3.3: Random Inconsistency (RI) Indices (n = 10).....	32
Table 4.1: Demographics of Participants.....	37
Table 4.2: Initial Pairewise comparison Matrix Components of Psychographic Factors .....	39
Table 4.3: Normalizing the Initial Pairwise comparison Matrix Components of Psychographic Factors .....	40
Table 4.4: The Final Matrix Prioritization Criteria Using AHP Method.....	40
Table 4.5: Random Index.....	42
Table 4.6: Local and Global Weights of All Variables.....	50

## LIST OF FIGURES

Figure 3.1: Research Model.....	34
Figure 4.1: Percentage Distribution of the Age of the Participants.....	38
Figure 4.2: Percentage Distribution of the Gender of the Participants.....	38
Figure 4.3: Percentage Distribution of the Education of the Participants.....	39
Figure 4.4: Percentage Distribution of the Job Experience.....	39
Figure 4.5: Software Result of Comparing Individual and Environmental Factors.....	43
Figure 4.6: Software Result of Comparing Individual Determinants.....	43
Figure 4.7: Software Result of Comparing Environmental Influences.....	44
Figure 4.8: Software Result of Comparing Demographic Factors.....	44
Figure 4.9: Software Result of Comparing Psychographic Factors.....	45
Figure 4.10: Software Result of Comparing Personality Factors.....	45
Figure 4.11: Software Result of Comparing Lifestyle Factors.....	46
Figure 4.12: Software Result of Comparing Socioeconomic Factors.....	46
Figure 4.13: Software Result of Comparing Cultural Factors.....	47
Figure 4.14: Software Result of Comparing Geographic Factors.....	47
Figure 4.15: Software Result of Comparing Use-Situation Factors.....	48
Figure 4.16: Dynamic Sensitivity for Individual Determinants.....	48
Figure 4.17: Dynamic Sensitivity for Environmental Influences.....	49
Figure 4.18: Dynamic Sensitivity for Environmental Influences All Factors.....	50

## LIST OF ABBREVIATIONS

AHP	Analytic Hierarchy Process
AIO	Activities, Interests, and Opinions
ANOVA	Analysis of Variance
CI	Consistency Index
CR	Consistency Rate
C.R.	Consistency Ratio
MCDM	Multi-Criteria Decision-Making
MCDM	Multi-Criteria Decision-Making
R.I	Random Index
R.I	Random Index
SES	Socioeconomic Status
SEM	Structural Equation Modeling
TRNC	Turkish Republic of North Cyprus
U.S	United States

# Chapter 1

## INTRODUCTION

### 1.1 Introduction

Consumer Behavior is the analysis of people, groups, or associations and the procedures they utilize to choose, maintain, and discard the product and services to satisfy their needs; and comprehend the effects of these procedures on individuals and society. Consumer behavior is very disparate. How a customer demonstrates his/her behavior is distinguished and not quite the same as some other buyer. Thus, it is for the most part seen that buyers show heterogeneous behavior in picking products and services (Assael & Roscoe, 1976; Blattberg & Sen, 1976), and it varies among different individuals (Kalwani & Morrison, 1977; Wind, 1978).

Utilizing a typical marketing strategy may not impact all consumers. Therefore, it is necessary to separate consumers into homogeneous teams so as to target them appropriately. Dividing consumers into subgroups according to their attributes and needs leads to creating affective strategies (Hallahan et al., 2007). Prosperous businesses are driven by appropriate segmentation (Lilien & Rangaswamy, 2004), that aids in building marketing strategies that affect segments.

Market segmentation gathers consumers with the same purchasing necessities and targets specific segments with similar needs using different marketing mix. Segmentation helps comprehend consumer needs appropriately, better resource

designation, distinguish best market opportunities, and plan accurate positioning strategies (Wind, 1978; Kotler & Keller, 2016; Yabin & Li, 2019). Recognizing market opportunities can be done in declining markets with the help of segmentation (Hooley & Saunders, 1993).

It is more economical and appropriate for firms to focus on a group of consumers instead of targeting a singular buyer. Hence, segmenting the market systematically helps distinguish better markets and fulfill their needs properly (Hajibaba & Dolnicar, 2019). Moreover, segmenting the market into homogenous groups will develop a competitive advantage (Gogoi, 2020). Most popularly utilized segmentation techniques are geographical, population, psychographic and behavioral (Changbo & Wei, 2002; Peicai, 2004; Ying, Shangwu, & Herve, 2007; Yu, Sun, & Goodman, 2009; Yan & Jiaqing, 2013; Song, 2014), Lifestyle also has been utilized at a product level (Bruwer & Reid, 2002).

In the 21st century, the Internet has altered social and economic communications, and a piece of this change has been transformed to business environment; the traditional communications between businesses and their customers are being replaced by or portioned with this new digital environment (Agudo-Peregrina, Pascual-Miguel, & Chaparro-Peláez, 2014). Segmenting consumers in the new online era in a way that satisfies their needs is one of the new areas that has received significant attention from marketers and academicians. Therefore, the current research is undertaken to review the previous studies in the market segmentation area and prioritize market segmentation categories in assessing consumer s' online purchasing behavior. This research will provide a broad and satisfactory literature review that informs the

marketers and academicians about areas already studied and recognize gaps in the existing literature for further research prospects.

## **1.2 Importance of the Study**

Considering the advancement in the Internet and technology and the widespread use of this development in the business environment, marketers have to improve their knowledge about the online market. There is a must for firms to adapt to this new environment if they wish to enhance their market share and profitability. The research conducted in the past utilized the market segmentation categories to classify consumer groups to better understand their needs and behavior. However, with the advent of the Internet and online shopping, which is increasing daily, there is a need for more research in this area so as to update our knowledge about consumer behavior in the new business environment. Therefore, this study aims to develop our knowledge about consumer behavior with the help of traditional market segmentation categories in an online environment.

## **1.3 Aim and Objectives**

The aim and objectives of this study can be expressed as follows:

- a. To understand the market segmentation categories and their impact on consumer behavior.
- b. To investigate the relative importance of these segments that marketers can employ.
- c. To compare various customer perceptions of the relative importance of these segments.
- d. To argue possible implications for businesses, marketers, and related academicians.

## **1.4 Research Questions**

In the present study our aim is to answer the following questions:

- a. What is the prioritization of market segmentation categories when assessing consumer behavior in an online era.
- b. Which market segment categories can be more beneficial in understanding consumers' online behavior.

## **1.5 Definition of Terms**

In order to reach the objectives of this study, market segmentation tools are divided into two major groups, individual determinants, and environmental influences.

1. Individual Determinants: These are factors related to the individuals' characteristics divided into four sub-factors; Demographic, Psychographic, Personality, and Lifestyle.
2. Environmental Influences: These are factors related to the environment and are divided into four sub-factors; Socioeconomic, Cultural, Geographic, and Use-situation.

## **1.6 Structure of Thesis**

The first chapter of this study introduces an introduction regarding the importance of understanding consumer behavior and the effect of proper market segmentation for having beneficial marketing activities. Moreover, in this chapter, the aims and objectives, research questions, and definitions of terms used in the study are presented briefly. The next chapter presents a review of previous studies regarding the impact of different segmentation categories in consumer buying behavior.

Chapter three illustrates the research design and methodology and introducing Analytic Hierarchy Process. In contrast, in chapter four, we will discuss the results, and chapter five will present the conclusion, theoretical and practical contributions, limitations of the study, and recommendations for future research.

## **Chapter 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The analysis of consumer behavior is a necessity and an integral part of marketing activities. It is regarded as a determinant element in the process of decision-making for corporations (Rickwood & White, 2009). In other words, consumer behavior analysis is a tool by which companies gain the ability to look into consumers in terms of their psychological needs, motivations, and habits. Once companies can reach these kinds of information, they would be able to find out the formulation of their marketing strategy and product pricing (Esteves & Cerqueira, 2017). This makes more sense, especially with the emergence of internationalization and interconnection of the world's economy, which prompts corporations to expand their market share as far as possible (Estrin et al., 2017).

Online businesses have passed their primary steps and, at present, are considered a severe threat to retailed businesses. Nowadays, customers are furnished with many ways that enable them to predict the possible risks of embarking on online purchases, such as monetary risks or risk or failure to deliver products and services. These estimations, in turn, affect the inclination of customers towards different products and services and finally interfere in their purchasing preferences (Cheema & Durrani, 2018). The worldwide acceptance of the Internet and online platforms have a considerable impact on people's everyday life and consequently influence commercial



transactions to a large extent. Customers use the Internet in search of some information, with the goal of communication, and sometimes even entertainment acts as an incentive. Therefore, the explosion of data and excessive internet usage lead sellers to adapt themselves proportionately (Lindner, 2015).

Despite the advantages of online shopping mentioned above, some drawbacks cause shoppers not to fully accept and adjust to this manner, such that approximately one percent of Internet shoppers return to the shops they have already purchased from. It means that purchasers are not secure under the Consumer Protection Regulations, 2010, which is referred to in circumstances where the Authority's licensees provide services. In this regard, it would be clear why shoppers avoid online shopping.

Market segmentation can be defined as the procedure of recognizing segments of the market and the precede of classifying a broad customer base into sub-groups of consumers comprising present and future consumers. Market segmentation is a consumer-oriented phenomenon and could be applied to nearly all kinds of markets. As for classifying or segmenting markets, researchers often search for shared characteristics such as common requirements, common preferences, identical lifestyles, or even the same demographic profiles. Therefore, market segmentation supposes that varied segments need varied marketing programs, as diverse customers are mainly targeted via various offers, prices, promotions, or a collection of marketing indicators. Market segmentation was primarily taken into consideration in the middle of the 1950s by Wendell.R. Smith, an American professor of marketing. "Market segmentation is in position to classify a market into smaller gatherings of shoppers with specific needs, features, or conducts who may require a single product or marketing mixes." (Goyat, 2011). Segmentation is the action of separating customers

into different gatherings with identical needs. The higher match between the needs, the lower the segment inclines to be; however, the more premium consumers are ready to pay for those products that specifically satisfy their needs (Goyat, 2011). Segmentation allows marketers to identify distinct groups of customers whose behaviors significantly differ from others. It permits corporations to adapt their marketing mix to fulfill the particular requirements of varied market segments.

## **2.2 Individual Determinants**

Despite the booming attention and note towards online marketing in the last decade, there is a lack of enough research trying to integrate studies from the standpoint of marketing and customer behavior. This gap in the literature has been an incentive to conduct this study. In this regard, the need for an effort in information systems and other allied areas (Saeed, Hwang, & Yi, 2003; Hodkinson & Kiel, 2003) to collect research findings is highly felt in order to specify the behavior of online consumer from the viewpoint of individual determinants.

### **2.2.1 Demographic**

The usage of demographic information in marketing goes back to long previous history. Over long years, variables such as age, income, gender, and education level have appeared as logically perfect estimators of customer behavior and the overall market-related performances in either micro and macro areas (Vilčeková & Sabo, 2013; Hou & Elliott, 2016). Demographic indicators, such as gender, age, income, marital status, and education level, are usually employed and investigated to segment the customer groups to set practical marketing strategies. Hence, demographics seem to be a vital foundation of market segmentation. According to Etzel *et al.* (2010), demographics can be characterized as the essential statistics which state a population. Under the definition of (Patel, Pradesh, & Pradesh, 2018), demographic indicators are

assigned to chosen population features as utilized in society, government, or other marketing areas.

Business dictionary (2013) age falls into the varying gatherings of the target market based upon their life cycle steps since customer requirements and preferences can potentially alter in the different age ranges. WHO (2014) describes gender as a construction that shapes people socially according to various characteristics, norms, roles, and relationships. Although most individuals are born either male or female, their norms and conduct differ sharply from each other. Digital marketing Glossary (2012) defines Gender marketing so that the marketing studies embrace performances that adjust marketing policies based on the targeted gender. Gender marketing mainly has applications in product policies and advertising.

According to Investopedia (2012), income is considered money that a person or business obtains in exchange for giving a good or providing a specific service. Consumers' income plays a crucial part in determining their purchase behavior. Furthermore, income is an element that considerably determines costumers' buying power (Hernández et al., 2011). Moreover, customers' jobs and education level impact their interests, and income puts purchasing potential to reality (Chen & Green, 2011). In this regard, consumers' income possesses a positive association with an inclination towards online purchasing. Hence, it could be stated that; income holds an effect on performing online purchases.

As per Business Dictionary (2014), occupation can be defined as a common or fundamental business, trade, or career. Handbook of Vital Statistics Systems and Methods (1991) characterizes marital status as the societal position of every person in

association with the marriage rules or conventions of the nation, defined as single, married, widowed and divorced, and married but legally separated. Marital status is a notable estimator of online buying behavior (Chandra & Sinha, 2013). Additionally, marital status possesses a powerful influence as a moderator on online buying behavior (Richa, 2012). The reasoning behind this positive association between marital status and carrying out online purchasing can exist. First, a most probably married couple will have a dual income, and second, they have limitations in terms of time relative to single people (Naseri & Elliott, 2011).

Yu *et al.* (2016) investigated the impact of demographic variables such as age, sex, education, number of family members, and income level upon using smart T.V. in Korea. They concluded that age does not influence the use of Smart T.V., whereas, in this study, education, number of family members, and income level showed a significant impact upon using Smart T.V.

Teo (2001) researched demographic and incentive variables affiliated with Internet adoption in Singapore, considering age, gender, and education level as demographic variables. He concluded that men have more tendency to involve in downloading and online buying in comparison with women. Moreover, those who are younger have more bias in dealing with messaging and downloading than older users. However, educational level makes no significant difference in messaging, downloading, and buying behavior.

Kooti *et al.* (2016) put an effort to find out and estimate customer behavior in online shopping by differentiating four demographic factors: age, gender, income level, and location. The results demonstrated that gender is crucial in determining online buying.

The frequency of online purchasing among females is more than males. However, when it comes to purchasing per person and the volume of spending money, males exceed females on average. The taste of males and females is different from each other while purchasing online. Females, moreover, show more concern about the negative repercussions of online purchasing. However, considering age, the extent to which individuals' money is readily available for spending, frequency of purchasing, average item price, and the money spent overall goes up as individuals get older such that individual whose age range is between 30 to 50 have maximum online shopping and since then, it starts to diminish. Lastly, depending on the extent to which people are wealthy enough, online purchasing habits differ such that it does not significantly affect buying expensive things online. Still, the frequency of purchasing, the price paid on average, and the money spent overall are higher relative to those individuals who are relatively poor.

### **2.2.2 Psychographic**

Psychographic segmentation can come into play based on personality characteristics, values, incentives, willingness, and lifestyles. A psychographic point of view could be considered by itself to divide a market, or it could be merged with other market segmentation indicators. The psychographic indicators are employed once buying behavior correlates with the unique features or lifestyles of customers. Different customers might respond in different ways to the businesses' marketing endeavors. The latest survey on psychographic segmentation is establishing the Wine Neophobia Scale (Ristic et al., 2016). Neophobia can be characterized as an excessive concern or defense towards the whole brand-new experiences. Hence, the goal was to provide marketers, researchers, and active in the wine industry with a proper segmentation tool to lead their marketing situation and plans. The resulting scale could be utilized to

divide a wine market and recognize the wine costumers who might be positive to brand new or replaced wine specifications. In contrast, the segmentation can also recognize those customers who may not be positive towards those wine styles.

Debasis and Sayantani (2015) performed a study to determine the variables affecting customers' minds toward purchasing products. A gathering of 250 participants was selected to carry out the desired research. The findings drawn from regression using Anova showed that psychographic attributes of the costumers alongside the indicators such as career, lifestyle, and values have the main effect on the inclination to purchase the products.

As per the study by Yadav and Mishra (2017), to clarify the impact of online motivations for costumers in terms of demographic and psychographic determinants upon the incentives for purchasing, data was gathered from the 100 participants via designing and distributing a structured questionnaire. SPSS software and ANOVA test were used to probe the research findings. It was revealed that the online shoppers' demographics attributes have a significant influence on the psychographic elements of the online purchases made by them. Moreover, Gupta and Batra (2017) did a study in the area of Delhi on the association between the demographic specifications to draw psychographic buying patterns of the women. They gathered data from the Delhi malls via a multi-stage sampling technique collected from 600 female participants. The findings showed a critical association between the demographic and psychographic buying patterns of the women.

Rehman et al. (2011) also looked into the online buying conduct of customers in Pakistan. The study intended to discover the causes stopping shoppers from purchasing

online. The results indicated that the sample population had prior experience purchasing online; however, some elements intervene in the proceeding of customers' online shopping patterns and their attitudes toward this. These variables are listed as social, psychological, emotional, and privacy phenomena. The research also found out that privacy and security (such as cyber hacking) variables make customers avoid purchasing online.

The status of an individual across the Psychographics spectrum is the predictor of the consumer's mind, which pinpoints how an individual contemplates, understands, reacts, and reflects. The psychographic research is applied to create a detailed understanding of the market segments along with psychological variables of the consumers (Goswami, 2007) such as needs, motives, perceptions, and knowledge.

### **2.2.3 Personality**

Personality is the hidden criterion considered for "individuals' characteristic mechanism of understanding, feeling, and conducts together with the psychological patterns. Thus, personality is a crucial variable that impacts individuals' conduct and preferences. Copas (2003) investigates the bivariate relationship of vigilance and readiness to revolution, two of the 16 personality variables characterized by Cattell (Conn and Rieke, 1994), with self-reported online purchasing incentives and attitudes towards online purchasing. She defines vigilance as the motivation to confide as opposed to being dubious about others' incentives and motivations, considerably and destructively connects to several self-reported purchasing online. The association of vigilance and judgment towards online purchasing is even more powerful. Being open to new experiences extensively and positively relates to the number of self-reported online purchasing and attitudes.

A study by Kwak et al. (2002) concluded that as individuals' scores on scales of sensation seeking soars, the likelihood of online purchasing goes up. Chen and Lee (2005) researched the impacts of customers' perception and perceived values upon attitude, confidence, and conduct of online customers. In addition, personality traits moderated this relationship. Twenty cosmetics were chosen, and across these countries, participants were randomly gathered from 20 hotel websites were selected, and after that, data was collected through a 48-item questionnaire on the Internet. They reached the conclusion that once costumers possess more extent of agreeableness and conscientiousness, main route website contents will be perceived as highly favorable for encouraging utilitarian purchasing value; nonetheless, once costumers' emotional stability grows, readiness and extraversion become more severe in accelerating experiential and hedonic purchasing value.

Wang & Yang (2008) explored the association among individual characteristics; harmonious passion, obsessive interests, compulsive buying conduct, and online purchasing dependency were investigated. An empirical study targeting 403 participants from a Taiwanese university was conducted. They inferred that either harmonious passion and obsessive interests could result in online purchasing dependency; passion is linked with compulsive purchasing behavior; compulsive purchasers are relatively stronger online shopping-dependent. What is more, researchers posited that three individual characteristics, including readiness to experience, agreeableness, and conscientiousness, can persuade people to embark on online purchasing actions. These outcomes might be informative to argue the impact of personal characteristics on online purchasing behaviors.



In the same manner, Huang & Yang (2010) researched the linkage between individual characteristics and online purchasing incentives regarding the Big Five model of personality and impulses for online purchasing. Data were collected with the aid of a sending out questionnaire to 216 respondents. After running regression analysis of data gathered, the interpretation of outcomes revealed that openness was positively correlated with adventure and attitude incentive, and conscientiousness positively related to convenience incentive. Another result was that extraversion showed a positive relationship with sociality incentive, and neuroticism positively correlated with the absence of sociality incentive.

Similarly, Chen (2011) strived to fill in the gap in the underdeveloped area of personality study relating to online purchasers. SEM model was applied to investigate the association among variables. The main results are as follows: (1) the whole five average level of characteristics, including innovativeness, requirement for cognition, confidence, value consciousness, and purchasing impulsiveness, have a significant relationship with online buying motivation (2) The Elemental characteristics of readiness for new ideas, conscientiousness, the requirement of arousal, and requirement material are affiliated with one or two average level traits accordingly. Furthermore, the research empirically subscribed to the Four-level Traits Hierarchical Model and indicated that personal features play the role of supplementary force behind other human incentives and impulses.

Lee *et al.* (2016) explored the association between Internet usage and the degree to which shoppers embark on offline shopping versus the extent to which they go for online settings and the impact of costumers' self-esteem upon their offline conduct and tendency towards e-shopping. Authors investigated 257 distributed questionnaires

after validation of answers and put causal relationships analyzed with structural equation modeling via AMOS. They understood that participants' self-esteem correlated highly with excessive online purchasing in a significant and negative manner. Either excessive offline purchasing or being addicted to the Internet showed a significant positive association with excessive Internet purchasing.

#### **2.2.4 Lifestyle**

Lifestyle is a collection of life habits specified in a psychographic area (Kotler & Armstrong 2014). To put it differently, lifestyle describes the way individuals live, the manner they spend money, and the style based on which they spend time. Kaur & Kumar (2018) mentions that an individuals' lifestyle is an equivalence of the way he lives and spends his money and time. Studies on customer conduct via lifestyle perspective are rare, although a study on lifestyle plays a determinant part in market segmentation and digesting the concept of target consumers (Krishnan & Murugan, 2007). Regarding Plummer (1974), lifestyle looks into individuals' activities regarding how they live, what they prioritize, what they are surrounded by, their views of themselves, and other underlying attributes such as age, income, location, and literacy rate.

Lifestyle is affected by elements such as demographics, social class, incentives, characteristics, feelings, values, culture, and past experiences. Lifestyle can have a causal effect on buying behavior of customers. Customers are stimulated to purchase goods so as to keep on a specific lifestyle. When we talk about a certain lifestyle, we discuss buying a particular product that gives special services. Buying attitudes have been investigated in coordination with a unique lifestyle regarding food, housing, tourism industry, investment, medical services, and entertainment. Each of them

pinpoints a specific lifestyle; every product affiliate with a particular subset of customer lifestyles (Krishnan & Murugan, 2007).

Lifestyle segmentation is crucial to study customer conduct and international marketing because of its significant effect on the daily buying decisions made by each person (Hung, 2009). The Activities, Interests, and Opinions (AIO) theory has fame for measurement of lifestyle. Assael (1992) defines lifestyle as a way of life in the world drawn by one's activities, interests, opinions, and values. Customers who have hedonic lifestyles on meeting their needs usually are affected by emotional phenomena rather than ration in purchasing goods and services.

Solomon (1998) expresses that lifestyle denotes the buying method that specifies an individual's choice to spend time and money. Lifestyle does not undergo constant and fast change. One might convert the lifestyle change into a trend. A vibrant lifestyle is an element that might accelerate growth in customer purchasing attitudes. Studies reveal that a healthy lifestyle positively and significantly influences the customer inclination toward organic foods (Chen & Lee, 2008; Qing et al., 2012). The ramifications illustrated that lifestyle has a positive and considerable massive influence on buying intentions, alongside other information proving that attitude can be a partial mediating impact of lifestyle and buying incentives.

### **2.3 Environmental Influences**

Across this survey, the external or environmental impacts on customers' inclination towards online purchasing are divided into four parts. These four parts are namely (1) socioeconomic factors; (2) cultural factors; (3) geographic factors; (4) use-situation factors.

### **2.3.1 Socioeconomic**

Socioeconomic status (SES) can be characterized under the title of ‘a person’s or group’s situation inside the hierarchy of a society (Lantos, 2015). It denotes a person’s social, physical, and cultural characteristics (Pechey & Monsivais, 2016). According to Moffitt (2010), social class can be referred to as a massive gathering of individuals who hold an identical circumstance from an economic standpoint. The social class contains varied dimensions such as job level, social power, age, literacy rate, race, and ethnicity. Comprehensive research proves that customers throughout social strata incline to indicate different psychological and behavioral paradigms from a characteristic point of view and that finally exhibit a specific manner (Baumann et al., 2017).

The socio-economic class would gather individuals who have similarities regarding how they behave, affected by their economic position in the marketplace. As for organic food consumption, numerous researches found out that wealthy households show more inclination towards purchasing organic products than poor households (Loureiro et al., 2001). Moreover, Curl et al. (2013) discovered a high relationship between a growing pattern in organic food consumption and increasing education levels among people. On the basis of earlier evidence (Alkerwi et al., 2015), people whose education and income level are both high are more familiar with the dangers of unhealthy foods and prefer those foods that seem healthier and nutritious. Another research by Shahar et al. (2005) indicated that constant costumers of organic food are considerably more educated, wealthy with higher social class. The likelihood that these customers perceive the superior values of organic food is pretty high relative to its convention.

Sociologists specified the algorithm of social class founded on the division of careers detailing a society's labor markets and the system of production. Categorizing customers based upon job level is commonly used in Europe. As stated earlier, this concentration on social class on the basis of job level is usual of social classification schemes utilized by European marketers (Griffin et al., 2002).

Historically, socioeconomic components have been considered determinant elements of describing customer inclination. In the scope of psychology and sociology recommend that socioeconomic situation can be accompanied by the existence of either constructive or destructive feelings. This survey gathers previous research to determine if the association between socioeconomic position and feelings revolves around people's lifestyle regarding specific food products (Lau, White, & Schnall 2013).

### **2.3.2 Cultural**

Culture can be defined as a multi-dimensional and complicated phenomenon, and consequently, there is no single agreed-upon definition. However, Hofstede (1984) gave an explanation on culture as "...the collective programming of the mind, that differentiate the people of a gathering from another" (p. 201). The transmission of culture will not happen genetically; thus, the culture can be gained by any individual who is in the right place and at the correct time. Most brand-new studies have consensus on the fact that ethnicity stems from the point that specific people are known via specific cultural characteristics. In this regard, Smedley (2014) states that race is the feature based on which individuals' species is broke down into distinct groups based upon inherited physical and behavioral attributes.

Overall, individuals' conduct and ideas toward innovations can be affected by others' cultural backgrounds; mainly, these effects originate from the culture of that country of origin (Muk & Chung, 2015). In the like manner, national cultural attributes potentially impact customer behavior in terms of navigating their attitude, perception, and choices towards different products and services. (Martinsons & Davison, 2007; Hofstede et al., 2010). These investigations connote that customer attitudes toward adopting new technology, such as m-banking, can alternate depending on the specific culture and across other regions. Nevertheless, because of the existence of various cultural properties of different countries, customers' perceptions, ideas, emotions, and conduct towards goods and services usually and considerably differ from each other (Merz et al., 2013). Thus, organizations will engage in more complicated and sophisticated customer buying conduct in the international market framework. In order to reach a higher profit, organizations ought to recognize these differences and be able to differentiate customers accordingly. If they do so, developing proper product strategies on the way to satisfy the needs of different customers will seem attainable.

A customer's buying decision is highly impacted, as stated earlier, by cultural and psychological indicators. Even though the cultural elements cannot be seen visually, they would be an influential factor determining customers' behavior. Culture as a collection of shared ideas, perceptions, interpretations, and social conventions substantially impacts customers' conduct and their strategy to purchase goods and services (Riemer et al., 2014). Consumers who come from identical cultural backgrounds show numerous similar purchasing behaviors. Therefore, as a matter of fact, analysis of consumer behavior is essential in marketing management and studying the marketplace (Cleveland & Laroche, 2007). Obal and Kunz (2016) looked into the reactions of customers across numerous countries to expert and non-expert online

reviews. They understood that the probability that Asian people confide in recommendations from online reviewers is pretty high. In contrast, most people from North American do not rely on non-expert online reviewers.

As per a study by Gentina et al. (2014), which systematically studied the purchasing conduct of individuals aged between 15 and 18 in the U.S. and France to evaluate the role of culture on purchasing behavior in the two countries, likewise, Shavitt and Cho (2015) researched into the impact of culture on customer behavior with emphasizing horizontal and vertical collectivism. The results showed that as a result of advancement in globalization, the number of companies that struggle to progress their businesses globally is growing fast (Estrin et al., 2017). Whereas, because of the presence of various cultures across different countries, these multinational corporations come across diversified customer buying behaviors on the way to develop their products or services (Merz et al., 2013). Organizations should set their sales strategies regarding regional cultures according to local consumers' perceptions and ideas, that both of them are influenced by individual and cultural indicators (Cleveland et al., 2016). At present, a variety of multinational organizations take into account the impact of numerous cultures while assessing transnational marketing strategies to make their products or services better all over the world. L'Oréal is a prime example in this regard. Its emphasis is on the localization strategy and setting differentiation marketing strategies across different countries.

### **2.3.3 Geographic**

Geographic segmentation comprises finding and targeting potential markets relative to the place where customers are occupied. The segmentation might target indicators such as climate, natural resources, and population density out of others. Markets could be classified into different areas due to the fact that some of these indicators can

distinguish consumers from one location to another. (Dholakia & Talukdar, 2004). For example, when it comes to the tourism industry, the people who occupy wet and cold climates are more likely to prefer warm and sunny places for holidays. This reality can strongly impact rivalry among airlines for specific areas, particularly during the peak holiday seasons. The area of travelers from which they come is also a determinant element that should be regarded, especially once setting organizational segments. Nowadays, business travelers might consist of traders whose job is to journey to numerous places across the world, from developing countries to developed ones. Therefore, a flexible timetable seems less critical than access baggage policies and low fares (Dholakia and Talukdar, 2004).

As for the wine industry, geographical components are an essential bridge between New World and Old-World wine-producing countries. As stated by Anderson and Pinilla (2018) Old World regions, there is a massive competition between Greece, France, Italy, Spain, Germany, Portugal, Austria, and Hungary that are categorized as Old-World producers versus U.S., Australia, New Zealand, Chile, South Africa and Argentina that are named as fall New World producers. However, the Old World has been more successful in gaining market share sales (Galati et al., 2017). This challenge has encouraged managers to optimize their marketing strategies overlapping customer preferences in these two different markets and to follow contextual components while trying to understand customer conduct (Petruzzellis et al., 2017), as well as considering alternative strategies while entering new markets.

#### **2.3.4 Use-Situation**

Companies release products and provide services in line with the preferences and requirements of their customers. Segmentation could be performed by utilizing different criteria to classify consumers, and in this regard, a crucial one would be



behavioral segmentation. In the framework of behavioral segmentation, requirements, advantages, and consumers' characteristics are examined (Kotler & Keller, 2012). The entire attribute might vary from one person to another. Two distinct individuals might purchase the same product but satisfy completely different requirements.

Additionally, usage algorithms and user types might differ from person to person. That's the reason why understanding behavioral segmentation needs a comprehensive overview from different angles based on various characteristics. Benefit segmentation falls into a behavioral segmentation (Kotler et al., 2016) and could be utilized in combination with numerous related segmentations.

Numerous preceding surveys on the wine industry have divided this product's costumers according to experience, consumption status, and tendency toward the usage of wine plus incentive for use (Bruwer et al., 2001). The engagement of customers differs based on the usage status. For instance, buying wine requires small regard if there is daily consumption; while, considerable attention is given to purchase aspects once wine consumption is done for huge gathering situations such as weddings, anniversaries, and birthdays (Ritchie, 2007; Charters, 2006).

Loyalty would lead to the creation of a rich set of affect-laden memories linked to a brand. Costumers are encouraged to utilize these sensational remembrances as a sign of classification to organize their emotional, cognitive, and behavioral perceptions relative to the product. Taking the feeling-as-information perspective, individuals utilize the present constructive effect existing in the nature of brand loyalty as a source of information to create a positive brand (Roy & Goswami, 2007).

A short beginning conversation of use rate division is in this way judicious. Utilization rate segmentation separates purchasers as per the amount they utilize an item. They are isolated into gatherings of non-clients and light, medium, and weighty item clients, and organizations frequently look to target one hefty client as opposed to a few light clients. This is because substantial clients comprise a trim level of the market but represent a high level of complete purchasing (Nora, Liza & Minarti, 2016). Consequently, an organization should try to adjust its marketing strategy as indicated by these clients.

Nonetheless, it ought to be referenced that it is significant not to prohibit non-clients because of the way that they may give a positive possibility to future extensions. The use rate variable may some of the timing cover with brand faithfulness, as it takes a gander at the rate and routineness with which consumers utilize an item or access assistance. When investigating interest for an item as far as social division, it would be separated particularly into those who use the item vigorously or regularly. However, the individuals who are no less loyal utilize the item once in a while (Nora, Liza & Minarti, 2016).

## Chapter 3

### RESEARCH METHODOLOGY

#### 3.1 Variables Used in the Study

The main goal of this study is to prioritize market segmentation tools in order to assess consumer behavior in the online environment. According to the previous studies and related books in consumer behavior (Beatty & Talpade, 1994; Chura, 2002; Coleman, 1983; Du & Kamakura, 2006; Harold & Sheffet, 1981; Hassan et al., 2017; Melnyk et al., 2009; Schiffman & Kanuk, 2010; Solomon, 2011; Su et al., 2003) , we categorized market segmentation methods in the second level as bellow:

1. Individual Determinants
2. Environmental Influences

Further, in the third level, we categorized individual determinants as below:

1. Demographic, Psychographic, Personality, and Lifestyle.

And environmental influences:

1. Socioeconomic, Cultural, Geographic, and Use-situation.

The variables and definitions can be seen in Table 1.

Table 3.1: Definition of Variables Used

<b>Individual Determinants</b>	Factors related to the individuals' characteristics.
<i>Demographic Segmentation</i>	These are factors that are used to define the characteristics of a person or a population.
Age	Age of consumers.

Gender	Male/Female.
Marital Status	Factors that describe a person's relationship with a significant other.
Income	It is the utilization and opportunity to save, acquired by an individual in a specific period.
Education	Education of consumers.
Occupation	It is an activity, often regular and often performed in exchange for payment.
<i>Psychographic Segmentation</i>	It divides consumers into sub-groups stand on psychological characteristics.
Needs-motivation	Motivation created by specific needs such as safety, security,....
Perception	Perception can be described as the procedure of selecting, organizing, and perceiving (low-risk, moderate-risk, high-risk).
Knowledge	Knowledge defined as acquaintance, information, or comprehension of someone or something.
Learning-involvement	Level of motivation someone has to learn (low-involvement, high-involvement).
<i>Personality Segmentation</i>	Individuals' personality traits (Extroverts, novelty seekers, aggressive, innovators).
Self-confidence	Confidence is a situation of being acuminate either that prognostication is accurate or that a selected action is considered the best.
Dominance	Dominant personality types are goal-oriented, decisive, and competitive.
Autonomy	Autonomy pertains to the degree to which an individuals' actions are self-determined as opposed to being forced or constrained.
Defense	Defense is defined as a mechanism in which people utilize in order to detach themselves from undesirable actions or events.
Sociability	The inclination and accompaniment skills to search out friendship, engage in relations, and participate in social actions.
Defensiveness	When a person is acting defensive, they're trying to protect or justify themselves.
Adaptability	Adaptability means to what extent an individual can adapt to change or new situations.
<i>Lifestyle Segmentation</i>	lifestyle is to show how people live, how to spend money, and how to allocate time.
Activities	Activities are real and visible behavior.
Interests	Interests are a customers' preference and priorities such as home, fashion, food.
Opinions	Opinions are how a customer feels regarding a wide variety of events.
Values	Value explains the scale of significance of some actions to determine what actions are best to do or what is the best way for living.
<b>Environmental Influences</b>	Factors related to the environment.
<i>Socioeconomic Segmentation</i>	Socio-economic conditions or advancements include a mix of social and economic components.
Social class	A social class is a collection of notions in the sociologies, and political theory centered on social stratification models that happen in class society.
Family life cycle	Refers to emotional and intellectual phases persons will pass from childhood to retirement years as a part of a family.
Family of Orientation	The family of orientation alludes to the family where an individual is raised.
Family of Procreation	A family of procreation is a family unit formed by two or more people.

Economic Circumstances	Economic conditions allude to the situation of macroeconomic factors and patterns in a country at a time.
<i>Cultural Segmentation</i>	It categorizes customers based on their cultural factors.
Nationality	The status of belonging to a particular nation.
Culture	Culture is defined as the thoughts, customs, and social conduct of a specific group or society.
Religion	A pursuit or interest followed with great devotion.
Race	A race is a categorizing of individuals according to shared physical or social qualities.
Ethnicity	An ethnic gathering or nationality is a gathering of individuals who relate to one another based on shared credits that separate them from different communities like typical traditions.
<i>Geographic Segmentation</i>	It categorizes customers based on geographic locations.
Region	Regions are districts that are widely characterized based on physical specifications, human impact specifications, and the interaction of humankind and the environment.
City size	The size of the city which customers are located.
Density of area	The density of the area which consumers are living.
Climate	Climate is the average weather over many years (temperate, hot, humid, rainy).
<i>Use-situation Segmentation</i>	It categorizes customers based on usage situations.
Usage rate	Super heavy users, heavy users, medium users, light users, nonusers.
Time	Leisure, work, rush, morning, night.
Objective	Personal, gift, snack, fun, health, achievement.
Location	Home, work, friend's home, in-store.
Group Influence	The manners by which people change their behavior to satisfy the needs of a group.
Brand loyalty	Brand loyalty is the positive emotions about a brand and devotion to buying the same product or service every time.

### 3.2 Analytic Hierarchy Process (AHP)

The customer is the focal point of all advertising and marketing actions. Comprehension of his/her actions is perhaps the central part of marketing. The reason behind consumers' purchasing is to fulfill their needs. Human needs are limitless and differing time to time, from one spot to another and man to man (Kumar, 2014). Buyer behavior doesn't continue as before or consistent in each circumstance, and it changes from time to time. According to their conduct, individual characteristics, geographical area, and lifestyle, marketing strategies should vary, in order to satisfy their needs.

Appropriate segmentation will aid companies in being conscious of the behavior of consumers. A proper segment contains consumers having consubstantial demand for products and services, behavior and reaction to the marketing strategies (McCarthy, 1982). The advancement in the Internet and technology leads the business environment into a new phase. There is a need for marketers and business owners to adapt themselves to this new era. Therefore, we need to investigate which market segmentation method will be more beneficial for the online business environment.

The Analytic Hierarchy Process (AHP) was first created by Saaty (1980) and is one of the multi-criteria decision-making (MCDM) methods that have been utilized since then. AHP provides a tool to prioritize different factors in the hierarchy and those aiding governments, companies, and researcher to concentrate on the most significant subjects (Cheng & Li, 2001). Since its creation, the AHP has been broadly utilized in industry settings, however scarcely in the marketing field. With the help of a set of pairwise comparisons at every hierarchal level, a matrix will be created, in which the factors have more weight and which one dominates other factors concerning the defined criteria.

The AHP is a standard of estimation via pairwise comparisons and depends on the judgment of specialists to determine the scales for prioritization. The comparisons will be made by utilizing a measure of judgment that displays how much more one factor dominates another one in the specific criteria. The AHP's primary concern is managing inconsistencies that emerge from the decisions (Vinodh, Shivraman, & Viswesh, 2012). It judges and chooses the factors, which affect the foreordained goal. The AHP has been utilized to assess precisely the impact of the criteria concerning the objective.

The AHP has been effectively carried out in different fields and broadly utilized in industry settings. For instance, the AHP method executed in logistics management by Ghodsypour and O'Brien (1998), Korpela, Lehmusvaara, and Tuominen (2001); and Lee and Hsu (2004); Braglia, Gabbrielli, and Miconi (2001), Çebi and Bayraktar (2003) and Bertolini and Bevilacqua (2006) implemented it in production section, it has been used in managing healthcare by Lee and Kwak (1999) and Kwak and Lee (2002); Kurttila et al. (2000), Masozera et al. (2006) and Malik, Abudullah, and Hussain (2015) applied it in managing environment; Radasch and Kwak (1998) and Kwak, Lee, and Kim (2005) used AHP in the marketing field and Ngai and Chan (2005), Grimaldi and Rippa (2011) and Hussain et al. (2015) in managing knowledge.

The use of the AHP approach incorporates three primary stages:

- 1) Developing hierarchal level or disintegration.
- 2) Creating comparative judgments or determining and implementing data collection to get a pairwise assessment on factors of the hierarchal structure.
- 3) Constructing a need ranking or combining them (Harker & Vargas, 1987).

The measurements, factors, and sub-factors are not similarly imminent to the decision at each level of the hierarchy, and every alternative rate is different on each model. Based on Crouch and Brent Ritchie (1998), AHP can impute an analytical method that can connect and fasten the measurement of choices and factors by both a person or a team who embraced the decision-making process. It ought to be noticed that the two components that are compared simultaneously to a great extent diminish the complicatedness of the analysis. According to a pairwise comparison, the analysis incorporates three endeavors:

- 1) Creating a pairwise correlation matrix at each set of the hierarchy, starting from level two to the end level.
- 2) Calculating the weights of each factor of the hierarchy.
- 3) Measuring the consistency level to investigate the judgments' consistency.

Factors in each level will be contrasted in sets respecting their significance to the facet in the subsequent higher level. Starting with the highest spot of the hierarchy and working down, the pairwise comparisons at a certain level will be reduced to a set of the matrix.

$A = [a_{ij}]_{n \times n}$  as follows:

$$\begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \cdot & \cdot & \cdot & \cdot \\ a_{n1} & a_{n2} & \dots & a_{nn} \end{pmatrix}$$

The matrix has reciprocating attributes that are:

$$a_{ji} = \frac{1}{a_{ij}}$$

Satty (1980) suggested a scale of relative importance between 1 to 9 that can be utilized for creating subjective pairwise, which is shown in table 2 below:



Table 3.2: A 9-Point Intensity of Relative Importance Scale (Satty and Kearns, 1985)

Intensity of Relative Importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to objective 1.
3	Moderate importance of one over another	Experience and judgment slightly favor one activity over another.
5	Essential or strong importance	Experience and judgment strongly favor one activity over another.
7	Demonstrated importance	An activity is strongly favored, and its dominance is demonstrated in practice.
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation.
2, 4, 6, 8	Intermediate values between the two adjacent judgments	When a compromise is needed.
Reciprocals of the above nonzero numbers	Reciprocal for inverse comparison	

When all matrices have been created, the weight vectors should be calculated according to Satty's eigenvector procedure,  $w = [w_1, w_2, \dots, w_n]$ . This weight calculation includes two fundamental stages:

- 1) At first, the comparison matrix,  $A = [a_{ij}]_{n \times n}$ , is adjusted utilizing equation (1)
- 2) Then, the weights will be calculated using equation (2).

Normalization

$$a_{ji}^* = \frac{a_{ij}}{\sum_{i=1}^n a_{ij}} \quad (1)$$

for all  $j = 1, 2, \dots, n$ .

Weight Computing

$$a_i^* = \frac{\sum_{j=1}^n a_{ij}}{n} \quad (2)$$

for all  $i = 1, 2, \dots, n$ .

Saaty illustrated that there is a relation between weight vector ( $w$ ) and the pairwise comparison matrix ( $A$ ), which can be seen below:

$$Aw = \lambda_{\max}W \quad (3)$$

The  $\lambda_{\max}$  amount is a significant validating element in AHP that can be utilized as a reference indicator to show data by computing consistency ratio (C.R.). Using equation (4), the consistency index (CI) can be achieved for every matrix, assisting in computing C.R.

$$CI = \frac{\lambda_{\min} - n}{n - 1} \quad (4)$$

Then, C.R. can be computed by equation (5):

$$C.R = \frac{C.I}{R.I} \quad (5)$$

The random consistency index is named R.I., and the R.I. value can be seen in table 3; it demonstrates the R.I. value from matrices between 1 to 10, which Saaty suggests. Based on this table, if  $CR \geq 0.1$ , the amount of consistency ratio represents inconsistency judgment. In such cases, it is essential to reconsider and revisit the significant numbers in the matrix.

Table 3.3: Random Inconsistency (RI) Indices (n = 10)

N	1	2	3	4	5	6	7	8	9	10
RI	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.51

According to Sally (1989), the geometric mean of every measurement can be acquired by equation (6) which will assist in obtaining the complete assessment of the pairwise comparisons of all factors concerned with the decision-making process.

$$a_{ij}^{hp} = \sqrt[q]{\prod_{q=1}^q a_{ij}^q} \quad (6)$$

Where  $a_{ij}^q$  is a component of matrix  $A$  of a factor  $q$  ( $q = 1, 2, \dots, Q$ ), and  $a_{ij}^{hp}$  is considered as a geometric mean of all factors  $a_{ij}^q$ . The group C.R. can be computed by equations (4) and (5).

For many years, the AHP has been utilized as the broadest technique by academicians and individuals who are involved in decision making (Taticchi et al., 2015), since the outcome of this technique is more precise and more instructive than the numeral methods (Cheng & Li, 2001); therefore, the AHP can be considered tailored for this research.

### **3.3 Hierarchal Structure Development**

This research aims to prioritize the market segmentation categories in assessing consumers' online behavior. The multi-criteria features are formed in a hierarchical structure, as explained earlier in section one of this chapter, with the highest hierarchy being the general objective. Then the researchers checked the responses for clarity and precision. The questionnaire was pilot examined with ten university students, five specialists from the marketing department, and five academic members in the related sector. According to the pilot study results, no augmentations or eliminations were made; only two definitions of terms were changed a little. Measures were taken to guarantee that the chosen participants had familiarity with the subject of the study. This made us certain about the legitimacy of our research framework, which can be seen below in Figure 3.1:

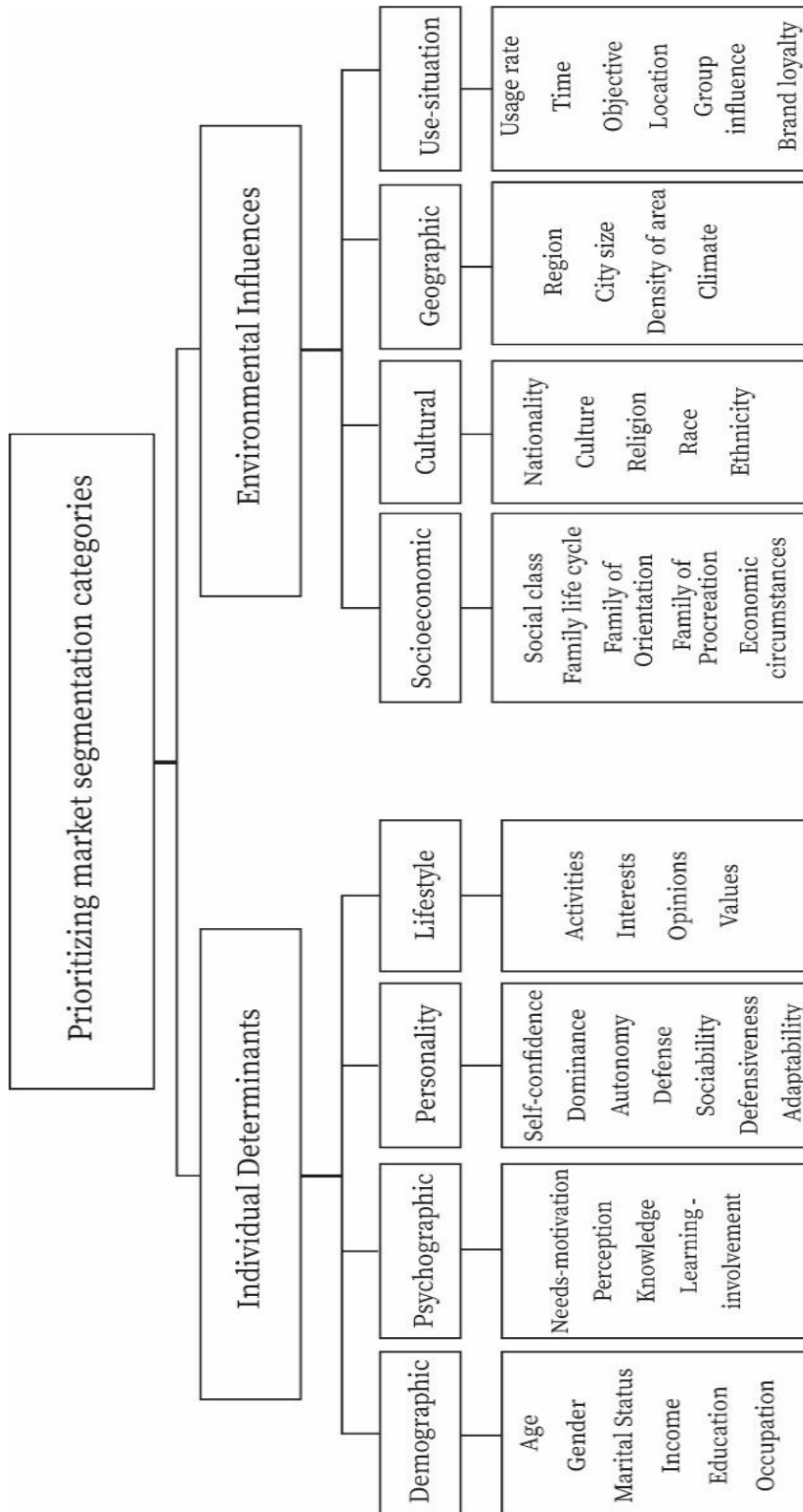


Figure 3.1: Research Model

### **3.4 Sample Design and Questionnaire Development**

The target respondents contained university students and individuals living in North Cyprus and have an online shopping experience. In order to distribute questionnaires, we used Microsoft word and send them to university students and their friends and relatives since it wasn't possible to distribute the questionnaire face to face because of the pandemic situation. Out of 88 questionnaires distributed to collect pairwise comparison data, 71 responses were obtained, which is considered a return rate of about 80% (71/88).

According to Cheng and Li (2001), small sample size is plausible from the perspective of the AHP method. The AHP is considered a subjective methodology, and there is no need for a significant number of respondents. The assessments of a small category of key informants are adequate to create dependable and valuable outcomes. With the help of the AHP method, we can solve the respondents' fatigue problem by requesting them to compare the significance of two elements at a time. These measurements are named judgments. Comparing and judging between two elements is less difficult for respondents than comparing 20 factors. The judgments we use in constructing paired comparisons consolidate rational thinking with the sensation created from experience. The comparisons will help us modify the consistency of judgments by making more information (Saaty 2012). Therefore, the sample size of 71 is regarded to be adequate for this study (Drake, Lee, and Hussain 2013; Saaty 2012).

Then, participants were inquired to select among different pairs of factors between the given criteria. For describing pairwise comparison, Satty (2012) offered a nine-point

scale demonstrated earlier in Table 3. The questionnaire was drafted according to the proposed model that was developed based on the market segmentation categories.

## Chapter 4

### RESULTS AND DISCUSSION

#### 4.1 Demographic Profile of Respondents

The demographics of respondents are shown in table 4, which illustrates that 50.7% were females while 49.3% were males. The percentage of the age group between 20-30 is 64.8%, 30-40 is 23.9%, and 40-50 is 11.3%. As can be seen, 80.3% were single, whereas 19.7% were married. Regarding their educational background, 35.2% were undergraduate, 47.9% were master's, and 16.9% were at the Ph.D. level. Concerning respondent's job experience shows that 35.2% for the group of lower than five years, 63.4% for 5-10 years, and 1.4% for 5-10 years.

Table 4.1: Demographics of Participants

<b>CATEGORY</b>	<b>FREQUENCY</b>
<b>GENDER</b>	
Male	35
Female	36
<b>AGE</b>	
20-30	46
30-40	17
40-50	8
<b>MARITAL STATUS</b>	
Single	57
Married	14
<b>EDUCATION</b>	
Undergraduate	25
Masters	34
PhD	12
<b>JOB EXPERIENCES</b>	
Lower than 5 years	25

5 – 10 years	45
10 – 15 years	1

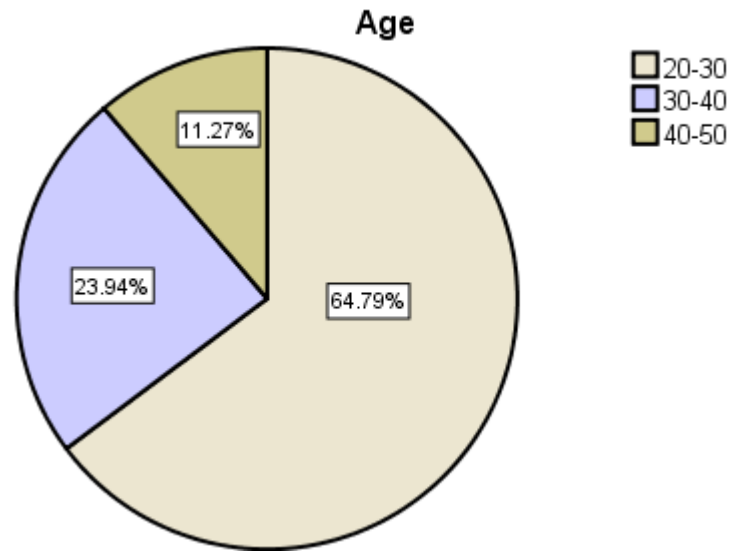


Figure 4.1: Percentage Distribution of the Age of the Participants

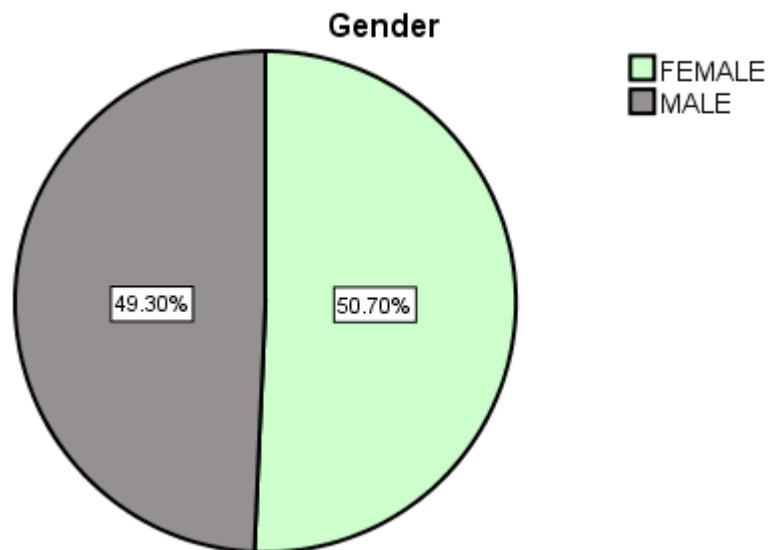


Figure 4.2: Percentage Distribution of the Gender of the Participants



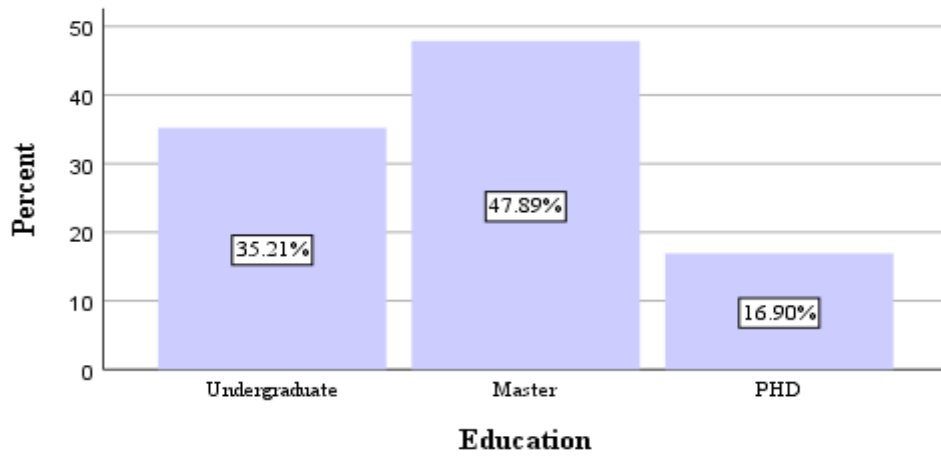


Figure 4.3: Percentage Distribution of the Education of the Participants

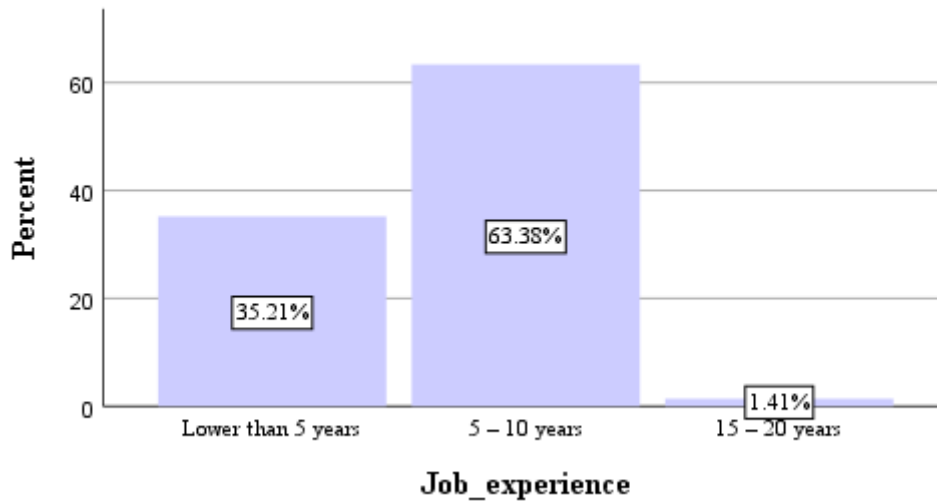


Figure 4.4: Percentage Distribution of the Job Experience

## 4.2 Results Utilizing Manual Calculation

Table 4.2: Initial Pairwise Comparison Matrix Components of Psychographic Factors

	<b>I1</b>	<b>I2</b>	<b>I3</b>	<b>I4</b>
<b>I1</b>	1	1.05	2.33	1.88
<b>I2</b>	0.95	1	2.60	1.14
<b>I3</b>	0.43	0.38	1	1.39

<b>I4</b>	0.53	0.88	0.72	1
<b>SUM</b>	<b>2.91</b>	<b>3.31</b>	<b>6.65</b>	<b>5.41</b>

Where

I1: Needs-motivation

I2: Perception

I3: Knowledge

I4: Learning-involvement

We normalized the table by below equation

$$a_{ji}^* = \frac{a_{ij}}{\sum_{i=1}^n a_{ij}}$$

Table 4.3: Normalizing the Initial Pairwise Comparison Matrix Components of Psychographic Factors

	<b>I1</b>	<b>I2</b>	<b>I3</b>	<b>I4</b>	<b>Average of rows</b>
<b>I1</b>	0.343	0.317	0.350	0.348	0.340
<b>I2</b>	0.327	0.302	0.391	0.211	0.308
<b>I3</b>	0.147	0.116	0.150	0.257	0.168
<b>I4</b>	0.183	0.265	0.108	0.185	0.185

Table 4.4: The Final Matrix Prioritization Using AHP

<b>Indexes</b>	<b>Weight Criteria (Average Rows)</b>
I1	0.340
I2	0.308
I4	0.185
I3	0.168

Thus, using the AHP approach, the criteria prioritized by this method are as follows:

I1: Needs-motivation

I2: Perception

I4: Learning-involvement

I3: Knowledge

**Weighted Sum Vector:**

$$\begin{bmatrix} 1.00 & 1.05 & 2.33 & 1.88 \\ 0.95 & 1.00 & 2.60 & 1.14 \\ 0.43 & 0.38 & 1.00 & 1.39 \\ 0.53 & 0.88 & 0.72 & 1.00 \end{bmatrix} \begin{bmatrix} 0.340 \\ 0.308 \\ 0.185 \\ 0.168 \end{bmatrix}$$

$$WSV = [1.410 \ 1.304 \ 0.682 \ 0.752]$$

**Consistency Vector:**

$$I1: \quad 1.410/0.340 = 4.147$$

$$I2: \quad 1.304/0.308 = 4.234$$

$$I3: \quad 0.682 /0.168 = 4.060$$

$$I4: \quad 0.752/0.185 = 4.065$$

$$C.V = [4.147 \ 4.234 \ 4.060 \ 4.065]$$

**Consistency Index:**

$$CI = \frac{\lambda_{min} - n}{n - 1}$$

$$CI = \frac{4.060 - 4}{4 - 1} = 0.02$$

**Consistency Rate:**

$$CR = \frac{CI}{RI}$$

$$CR = \frac{0.02}{0.90} = 0.02$$

Table 4.5: Random Index

N	1	2	3	4	5	6	7	8	9	10
<b>RI</b>	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.51

### 4.3 Results by Software

Expert Choice 11.0 was utilized for analyzing the data. Weights were assigned to the criteria factors (individual determinants and environmental influences) with calculating the geometric mean value of each if it is lower than one and calculating the reverse if it is greater than one.

#### 4.3.1 Comparing Factors in Level 2

Individual determinants and environmental influences were compared in order to find out which one is more significant when assessing online shopping behavior. As shown in figure 6, individual determinants have a 0.592 weight which is higher than environmental influences with a weight of 0.408. It reveals that individual determinants are more important than environmental influences when we wish to segment consumers according to their online behavior.

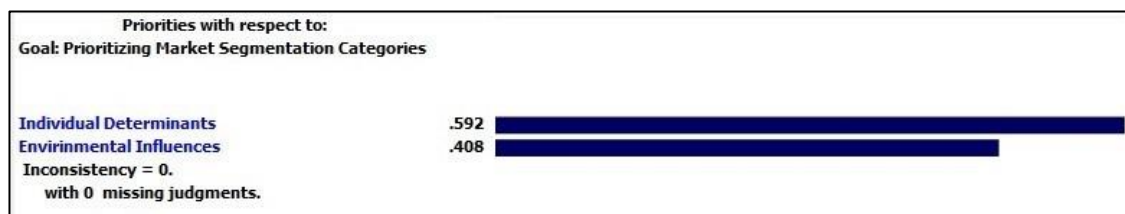


Figure 4.5: Software Result of Comparing Individual and Environmental Factors

### 4.3.2 Comparing Factors in Level 3

#### 4.3.2.1 Comparing Individual Determinants

All factors under individual determinants were compared, and an inconsistency ratio of 0.04 was obtained, which we can say it's a good consistency, and paired comparisons of the models are pretty significant. The demographic factors placed the highest importance with the weight of 0.518, while the weight of psychographic, personality, and lifestyle are 0.205, 0.146, and 0.131, respectively. Therefore, we can conclude from this result that demographic factors have priority when it comes to assessing consumers' online buying behavior.

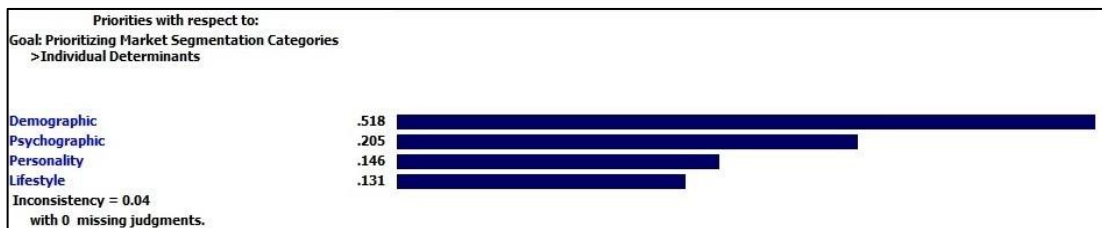


Figure 4.6: Software Result of Comparing Individual Determinants

#### 4.3.2.2 Comparing Environmental Influences

Comparing all environmental factors and overall inconsistency of 0.05 was achieved, proving that the paired comparison is significant. The geometric mean imputed and the weight of factors was allocated. As demonstrated in figure 8, socioeconomic factors have received greater importance when we wish to categorize consumers based on environmental influences with the weight of 0.410, then the weight of 0.315 for cultural factors, followed by 0.170 for geographic factors 0.106 for use-situation.

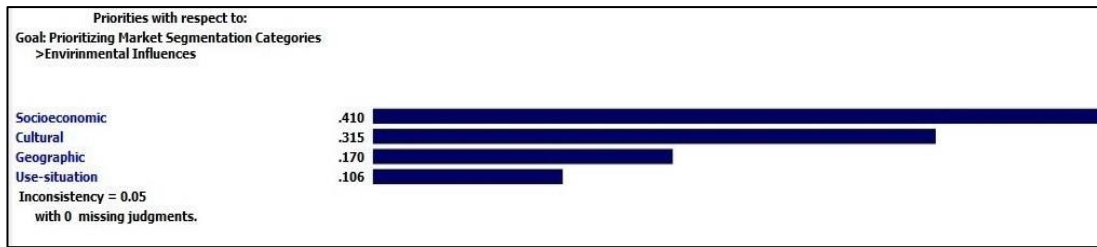


Figure 4.7: Software Result of Comparing Environmental Influences

### 4.3.3 Comparing Factors in Level 4

#### 4.3.3.1 Comparing Demographic Factors

Regarding demographic factors, the rate of inconsistency was 0.07, and since it's lower than 0.1, we conclude that the pairwise comparison of our model is quite significant. As can be seen in figure 9, age has received the highest importance with the weight of 0.306, followed by 0.248, 0.228, 0.087, 0.084, and 0.047 for gender, marital status, education, income, and occupation, respectively. Therefore, age is considered the most crucial factor that can lead to online purchasing adoption.

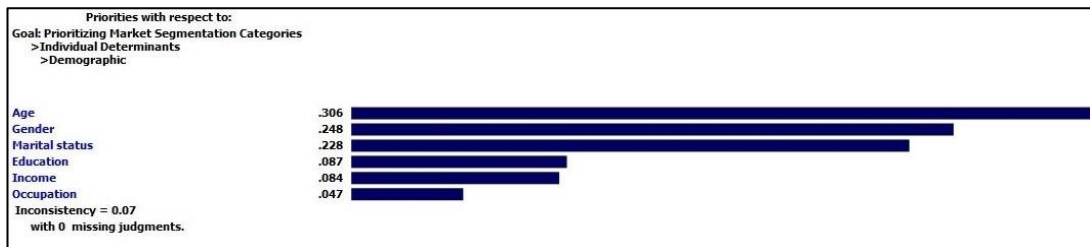


Figure 4.8: Software Result of Comparing Demographic Factors

#### 4.3.3.2 Comparing Psychographic Factors

In figure 10, the results of comparing psychographic factors are illustrated. The degree of inconsistency was 0.03, and since it's less than 0.1, the pairwise comparison is considered significant. In this criterion, the highest degree of importance is given to

needs-motivation with the weight of 0.340. Then it's followed by 0.310, 0.184, and 0.167 for perception, learning-involvement, and knowledge, respectively.

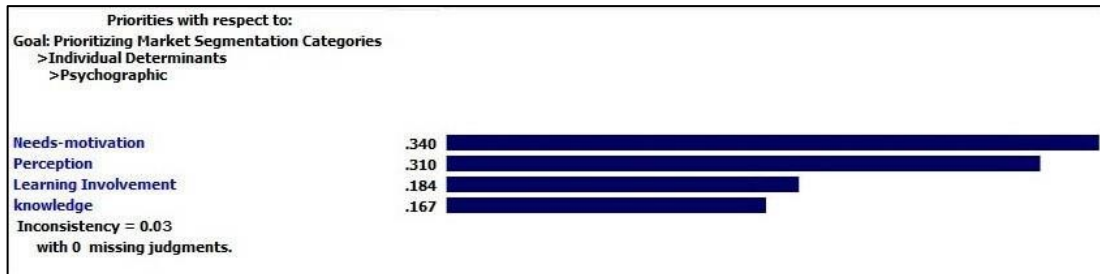


Figure 4.9: Software Result of Comparing Psychographic Factors

### 4.3.3.3 Comparing Personality Factors

As can be seen in figure 11, the results of comparing personality factors have obtained a 0.06 inconsistency ratio, and it's significant for our proposed model. In this category, the most important factor in consumers' personality, which can lead to online shopping adoption, is self-confidence with the weight of 0.261. Followed by 0.195, 0.182, 0.136, 0.110, 0.074, and 0.043 for autonomy, dominance, defense, defensiveness, sociability, and adaptability respectively.

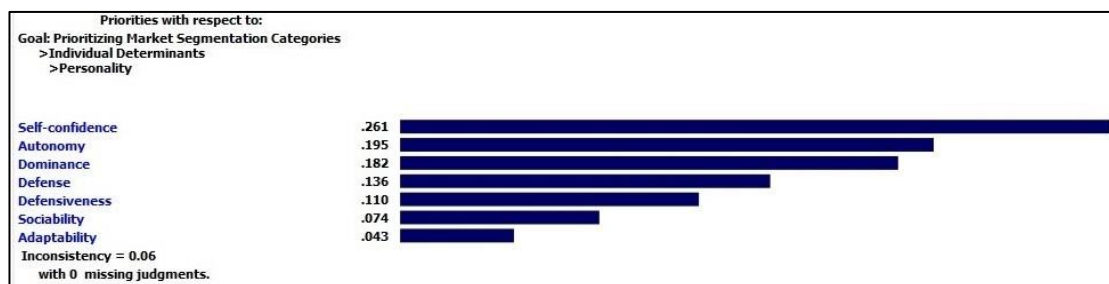


Figure 4.10: Software Result of Comparing Personality Factors

### 4.3.3.4 Comparing Lifestyle Factors

Lifestyle factors were also compared, and the results showed an inconsistency level of 0.08, which is less than 0.1, and the pairwise comparison is significant. As

demonstrated in figure 12, the activity of consumers has a priority in their decision about how to buy, from stores or online, with the weight of 0.540. The degree of importance of other factors in lifestyle criteria belonged to opinion with the weight of 0.186, interests 0.177, and values 0.097.

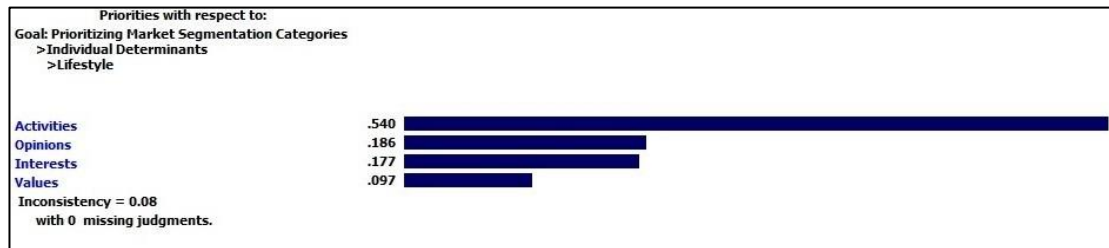


Figure 4.11: Software Result of Comparing Lifestyle Factors

#### 4.3.3.5 Comparing Socioeconomic Factors

Figure 13 illustrated the result of comparing socioeconomic factors with the inconsistency ratio of 0.05, which is less than 0.1 and significant. It can be seen that the social class of customers is prioritized to other factors under socioeconomic criteria with the weight of 0.443. This is followed by 0.182, 0.162, 0.155, and 0.057 for the family of orientation, family life cycle, the family of procreation, and economic circumstances.

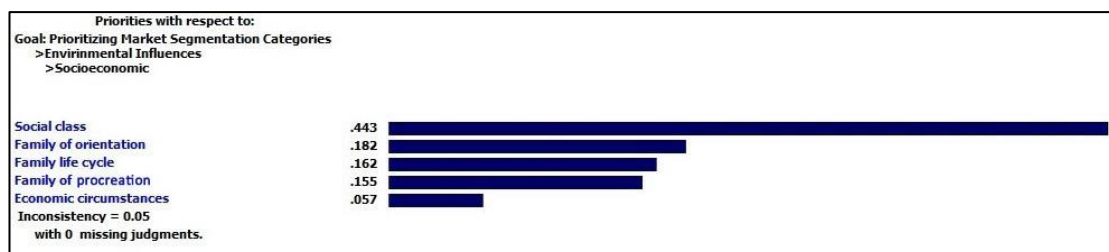


Figure 4.12: Software Result of Comparing Socioeconomic Factors



### 4.3.3.6 Comparing Cultural Factors

We compared the cultural factors, and the results showed a significant inconsistency level of 0.08. It is demonstrated in figure 14 that between cultural factors, culture with the weight of 0.302 is prioritized. The weights achieved by other factors were 0.252, 0.197, 0.127, and 0.123 stands for nationality, religion, race, and ethnicity.

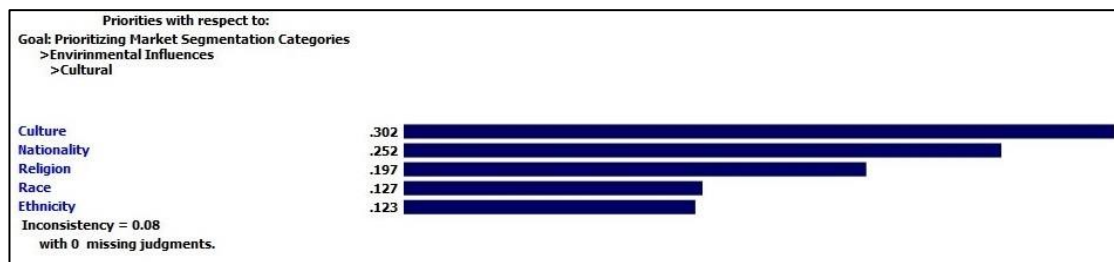


Figure 4.13: Software Result of Comparing Cultural Factors

### 4.3.3.7 Comparing Geographic Factors

The geographic factors were also compared, and we received an inconsistency ratio of 0.00617, which is less than 0.1 and significant. The region acquired the most critical factor among geographic with the calculated weight of 0.297, followed by 0.271 for city size, 0.253 for density of the area, and 0.179 for the climate.

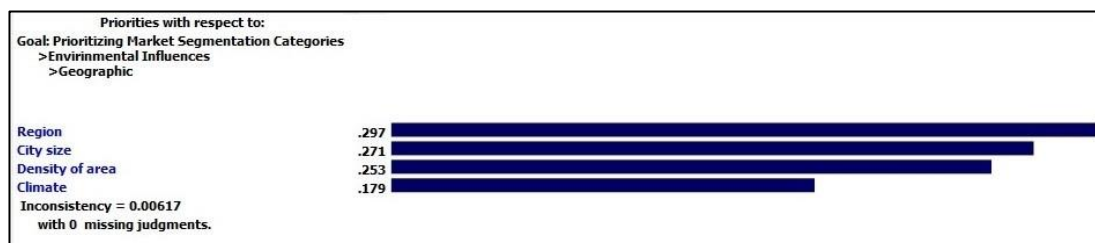


Figure 4.14: Software Result of Comparing Geographic Factors

#### 4.3.3.8 Comparing Use-Situation Factors

Likewise, use-situation factors were compared, and as figure 16 demonstrates, an inconsistency ratio of 0.04 was achieved, which shows that the pairwise comparison of the model is significant since it's less than 0.1. In this comparison, the usage rate was granted reference by weighting 0.265. Then the degree of importance is followed by time, objective, location, group influence, and brand loyalty with the weights of 0.221, 0.193, 0.172, 0.099, and 0.051, respectively.

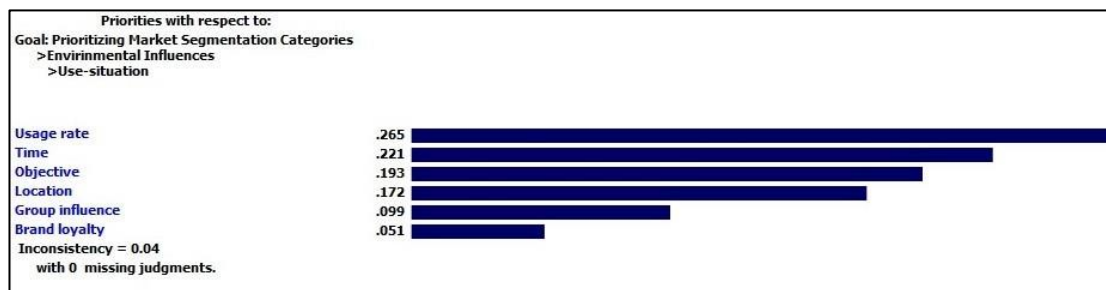


Figure 4.15: Software Result of Comparing Use-Situation Factors

#### 4.3.4 Dynamic Sensitivity for Individual Determinants

Dynamic sensitivity for individual determinants in figure 18 illustrates that demographic is more important than the other factors by having the highest percentage of 51.8%. In contrast, psychographics, personality, and lifestyle have 20.5%, 14.6%, and 13.1%, respectively. These percentages have an impact on the percentages of their sub-factors.

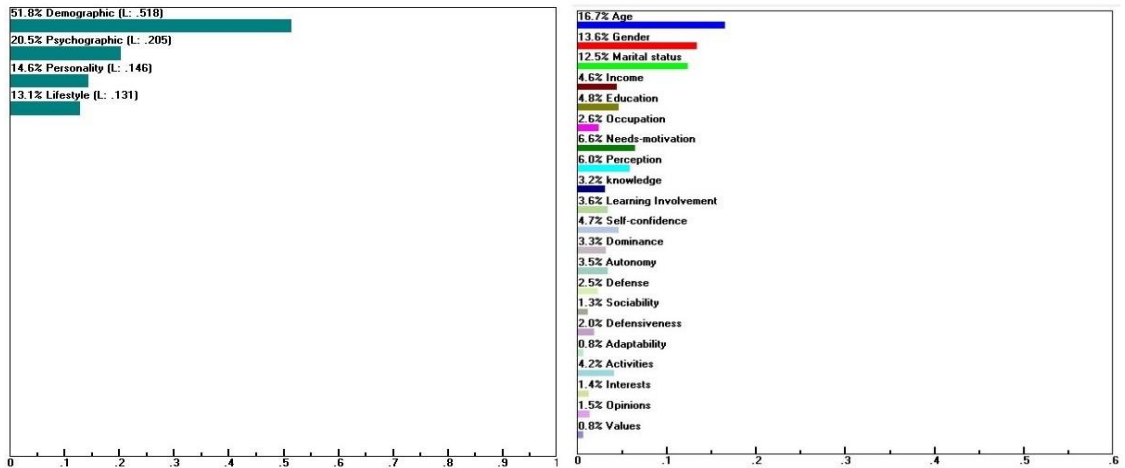


Figure 4.16: Dynamic Sensitivity for Individual Determinants

### 4.3.5 Dynamic Sensitivity for Environmental Influences

Also, the dynamic sensitivity for environmental influences is demonstrated in figure 19. Socioeconomic factors have a percentage of 41.0%, which is the highest proportion in the environmental factors. While cultural has received a percentage of 31.5%, geographic 17.0%, and use-situation 10.6%.

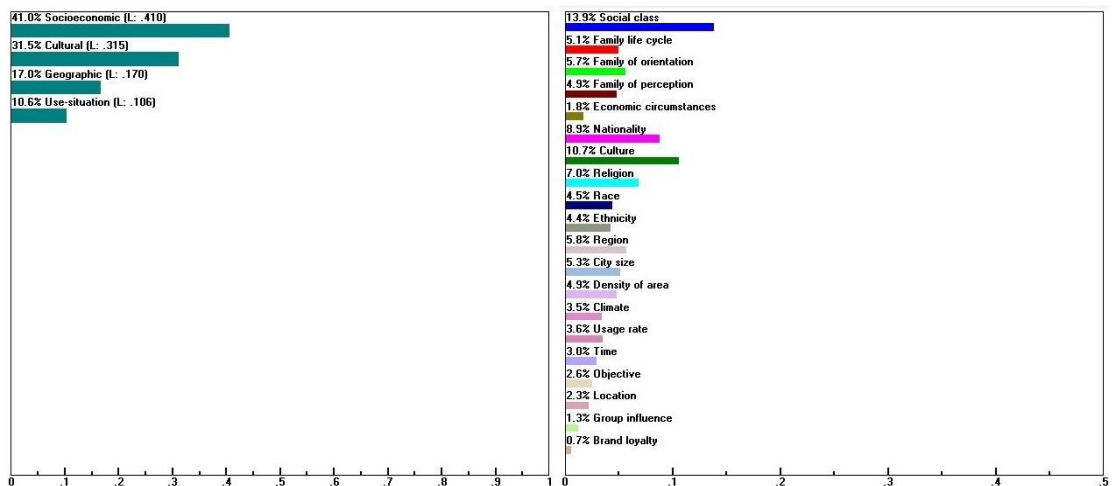


Figure 4.17: Dynamic Sensitivity for Environmental Influences

### 4.3.6 Dynamic Sensitivity for All Factors

Finally, comparing all the factors in our model, individual determinants, which contain the aspects of individual characteristics, have a percentage of 59.2% and environmental influences, as shown in figure 20, 40.8%. The figure also shows that age has the highest importance with a portion of 10.1%.

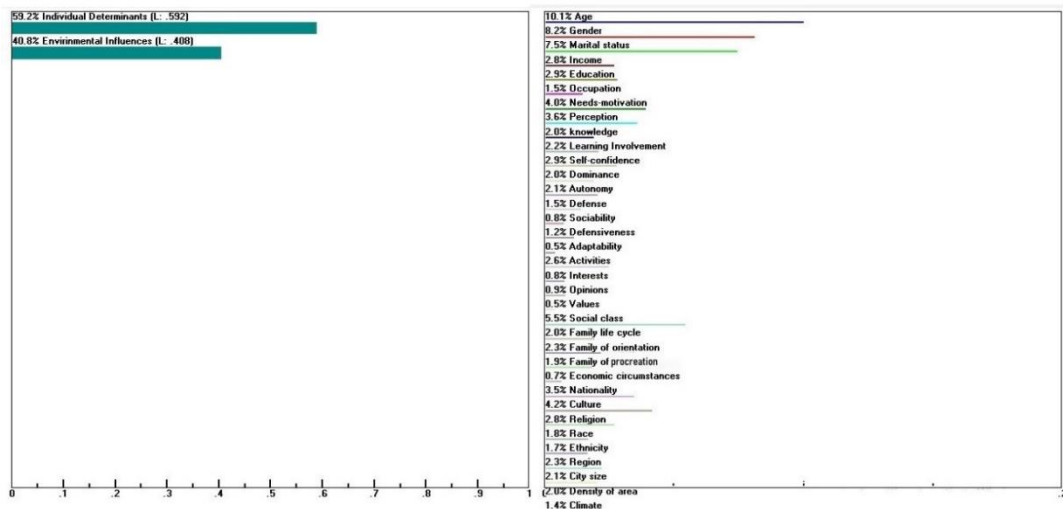


Figure 4.18: Dynamic Sensitivity for Environmental Influences All Factors

### 4.3.7 Local and Global weight of all factors

The related weights of all factors used in our research model are reported in table 9. local weights refer to the weights, which are calculated in each level of the model, and global weight contains the weights of all factors used in level four in the model.

Table 4.6: Local and Global Weights of All Variables

<i>Dimension/Factor</i>	<i>Local Weight</i>	<i>Local weight</i>	<i>Local weight</i>	<i>Global Weight</i>	<i>Ranking</i>
<i>Individual Determinants</i>	.592				
<i>Demographic Segmentation</i>		.518			
Age			.306	.0938	1
Gender			.248	.0760	2
Marital Status			.228	.0699	3
Income			.084	.0257	14
Education			.087	.0266	12
Occupation			.047	.0144	26
<i>Psychographic Segmentation</i>		.205			
Needs-motivation			.340	.0412	6

<i>Perception</i>		.310	.0376	8
<i>Knowledge</i>		.167	.0202	19
<i>Learning-involvement</i>		.184	.0223	17
<b>Personality Segmentation</b>	.146			
<i>Self-confidence</i>		.261	.0225	16
<i>Dominance</i>		.182	.0157	25
<i>Autonomy</i>		.195	.0168	22
<i>Defense</i>		.136	.0117	29
<i>Sociability</i>		.074	.0063	35
<i>Defensiveness</i>		.110	.0095	31
<i>Adaptability</i>		.043	.0037	37
<b>Lifestyle Segmentation</b>	.131			
<i>Activities</i>		.540	.0418	5
<i>Interests</i>		.177	.0137	27
<i>Opinions</i>		.186	.0144	26
<i>Values</i>		.097	.0075	33
<b>Environmental Influences</b>	.408			
<b>Socioeconomic Segmentation</b>	.410			
<i>Social class</i>		.443	.0471	4
<i>Family life cycle</i>		.162	.0270	11
<i>Family of Orientation</i>		.182	.0304	10
<i>Family of Procreation</i>		.155	.0259	13
<i>Economic Circumstances</i>		.057	.0095	31
<b>Cultural Segmentation</b>	.315			
<i>Nationality</i>		.252	.0323	9
<i>Culture</i>		.302	.0388	7
<i>Religion</i>		.197	.0253	15
<i>Race</i>		.127	.0163	23
<i>Ethnicity</i>		.123	.0158	24
<b>Geographic Segmentation</b>	.170			
<i>Region</i>		.297	.0205	18
<i>City size</i>		.271	.0187	20
<i>Density of area</i>		.253	.0175	21
<i>Climate</i>		.179	.0124	28
<b>Use-situation Segmentation</b>	.106			
<i>Usage rate</i>		.265	.0114	30
<i>Time</i>		.221	.0095	31
<i>Objective</i>		.193	.0083	32
<i>Location</i>		.172	.0074	34
<i>Group Influence</i>		.099	.0042	36
<i>Brand loyalty</i>		.051	.0022	38

## **Chapter 5**

### **CONCLUSION AND RECOMMENDATION**

#### **5.1 Introduction**

The four first chapters of this study summarized the previous literature concerning consumers' behavior and diverse methods used by advertisers and academics for segmenting consumers. According to past studies, discrepancies in consumer behavior based on their characteristics have also been provided.

The hieratical model was proposed based on different segmentation categories used in previous researches after reviewing the definition and significance of different market segmentation categories in understanding consumer behavior. In the next chapter, the analysis was conducted using Expert Choice Software, and the outcomes have been reported and discussed. In this chapter, the conclusion and implication and some recommendations for future studies will be offered.

#### **5.2 Conclusion**

Given the new business and market era, we aimed to determine the value of the different categories of market segmentation used primarily in the traditional marketplace to assess online customer behavior. Based on the concept of our subject, we categorized different market segmentation methods which have been used by marketers and academicians with investigating through past studies.

Consumer behavior has always been a significant concept for business owners and advertisers to understand their customers and meet their needs, considering their differences. People are different, and so their responses to various circumstances. Since advancements in technology and widespread use of the Internet have transformed the traditional market into a new business environment, organizations must adjust to this new development if they wish to attain customer satisfaction and survive in this competitive environment. They comprehend their consumers by segmentation of the market into various categories based on certain factors.

Marketers and analysts used consumer segmentation to know better people, their desires, interests, and responses to changes in how they act, sell and buy. Market segmentation includes many tools such as consumers' demographic characteristics, geographical situation, psychographic, and behavioral factors.

We categorized market segmentation into two main categories, namely, individual determinants and environmental influences. Then, individual determinants have split into four groups; demographic, psychographic, personality, lifestyle.

Environmental influences are divided into socioeconomic, cultural, geographic, and use-situation. In the next step, factors in level three are apportioned into the related sub-factors. Later, the relative importance of each element was analyzed using one of the most common multi-criteria decision making (MCDM) techniques, which is the analytic hierarchy process (AHP).

The results of this study illustrated that in the second level of our hierarchal model, which includes individual and environmental factors, individual determinants have

more influences on consumers' decisions when it comes to choosing between traditional and online shopping. Regarding the third level of the model, demographic factors are prioritized compared to other factors under individual determinants. On the other hand, socioeconomic factors are the most important factors among other environmental influences.

Concerning the fourth level, and based on the results of the global weights of our variables, age, gender, and marital status achieved the position of most influential factors in determining consumer behavior in the context of online shopping. These results confirm studies that have been conducted before in this area. For example, based on a study conducted by Aharony (2015), older people will require more time to become familiar with technological developments. Similarly, Wong et al. (2012) believed that young and old customers have distinct demands, preferences, and goal orientations when it comes to using new technologies. Given the disparity between older and younger customers in the acceptance of online shopping, our results illustrate that age is the most important determinant of consumer behavior in the online era.

Gender attained the place of the second important factor. Gender disparities were shown to give rise to various decisions and information processing in the past literature (Teo et al., 2012; Wong et al., 2014). Different male and female decision-making processes connect with gender, which determines how individuals behave in society. Based on these disparities among males and females, they are more likely to have various behavior in online buying.

Concerning marital status, which achieved the third position in our findings, it also supported the results of past studies. Marital status is a significant predictor of online



shopping since the living condition is different for married people in terms of time and income compared to single ones (Naseri & Elliott, 2011; Richa, 2012; Chandra & Sinha, 2013).

On the other hand, group influence, adaptability, and brand loyalty were found to be the least essential elements in encouraging consumers to shop online. There are many distinct product specifications in this newly competitive market, and buyers can choose from numerous product categories. These factors are significant in nature; however, they became the least important element in the area that we conducted our study, and it may be different in another region. Our findings confirm that different conditions of living and demographic characteristics are more important than the effect of group influence, adaptability, and brand loyalty in the case of North Cyprus.

### **5.3 Theoretical Implications**

Regarding the theoretical implications, the results are aligned with prior studies revealing that age, gender, and marital status are the most critical elements in shaping customer behavior concerning the adaption of online shopping.

This research expands understanding of the effect of categories of consumer segmentation on improving the efficiency of marketing tactics and makes significant scholarly contributions. Firstly, in the traditional marketplace, the benefits of segmentation strategies have been investigated, and, in this study, they are employed within the online environment. Most research has used some of these approaches separately to study their effects on consumer behavior; however, we assessed the importance of all methods together. Secondly, the knowledge of the relative importance of each strategy is enhanced by our research. Therefore, when studying

consumers' online behavior, academics could concentrate on more determining elements.

### **5.3 Practical Implications**

This study has considerable implications for managers in TRNC and countries that have similar conditions. With our key objective, to prioritize different market segmentation categories in determining online consumer behavior, we offer a reliable analytical basis for the relative importance of market segmentation methods, better market position of the product, and effective advertising. Targeting all shoppers would result in a wasted effort to acquire consumers and costly advertising expenditure. The results recommend that business managers in North Cyprus focus their attention on the effect of age on online consumer behavior; that is, the younger the customers, they are more likely to change their shopping method from in-store shopping to online shopping. Moreover, gender and marital status have more degree of importance after age, which should be focused on.

Marketing activities like advertising and promotional policies cost the organization a great deal of money and time. Managers can focus their marketing activities and use their budget more effectively for a competitive advantage by selecting a specific segment and concentrating on its particular characteristics. Therefore, if company managers are interested in running an online business or plan to go from selling products in the store to online strategies in North Cyprus, they are strongly encouraged to select their target market properly and concentrate more on the group of customers enjoying new experiences. However, they can benefit from the results of this study and apply more target-oriented and productive segmentation strategies to enhance their company's performance.

## **5.4 Limitation and Recommendation for Future Studies**

Some limitations of this research offer prospects for investigation. First, the data were collected during the COVID-19 pandemic situation. We could not use a large sample size; fortunately, AHP is working with a smaller sample group; however, future research can be done with larger sample size.

Another limitation of this study is that we used North Cyprus as the case study, which is considered an underpopulated island. Hence, future research can use other countries with more populations to investigate the most effective segmentation method in assessing consumers' online behavior.

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