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Market opportunities of organic olive oil in Lebanese restaurants

Abstract
Dining out organically became a popular trend globally. Studies linked to the consumers of organic food in restaurants as well as the restaurateurs' perspectives on the adoption of organic food are still very limited in literature. In order to study the market opportunities of organic olive oil in the Lebanese restaurant channel, an exploratory survey was conducted on 20 restaurants located in the city of Beirut, Lebanon, which investigated the consumers' and managers' behavior regarding the use and consumption of organic olive oil. The results showed a promising future potential for organic olive oil in the Lebanese restaurants. Almost all managers were interested to introduce organic olive oil in their restaurants and 73% of consumers were interested to consume it and were willing to pay more for it.

Key words: ***Organic olive oil, consumer behavior, willingness to pay, restaurants.***

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Sincerely, Zeina

shipment of Lebanese produce for export, had a big effect on the organic market by pushing more Lebanese consumers to reconsider their diet quality and to claim clean products free from pesticide residues, and so to choose to turn to organic food.

1.2.Current situation of the organic sector in Lebanon

Today, organic agriculture is a growing field in Lebanon; it has been witnessing a constant increase since the early 90s.
In October 2009, the Mediterranean Organic Agriculture Network (MOAN) stated that it currently exists 302 organic farms in Lebanon covering an area of 9443,70 (ha) and this area was composed of permanent grasslands (6,125 ha), fresh vegetables and melons (569.9 ha), cereals (493.9 ha), olive (300.7 ha), plants harvested green (290.3 ha), grapes (266.5 ha), wild collection (111.4 ha), fruit trees (21.2 ha), nuts (8.0 ha), permanent medicinal and aromatic plants (2.5 ha), berries (1.2ha), seeds and seedlings (1.0 ha) and citrus (0.4ha).

Table 1: MOAN statistics, 2009.

Organic land area	Area in ha	% of total
Total certified area	**9,443,70**	**100**
Permanent grasslands	6,125	64.9
Fresh vegetables and melons	569.9	6.0
Cereals	493.9	4.7
Olive	300.7	3.2
Plants harvested green	290.3	3.1
Grapes	266.5	2.8
Wild collection	111.4	1.2
Fruit trees	21.2	0.2
Nuts	8.0	0.1
Permanent medicinal and aromatic plants	2.5	0.0
Berries	1.2	0.0
Seeds and seedlings	1.0	0.0
Citrus	0.4	0.0
Other	1,305.07	13.8

Lebanese organic farmers are characterized by owning small pieces of land and not working in group or cooperation. They are scattered and work mainly individually (Fawaz, 2011).
Organic processing in Lebanon is mainly focused on production of typical food used in Lebanese cuisine, such as organic olive oil, oregano mix, orange blossom water, and traditional Lebanese jams and recipes. There are four processing units located in: Merjayoun; Bent Jbeil; Chouf and Bsharri, which are mainly producing jams (all kind), essential oils, fresh and pasteurized juices, rose water, honey, flour, dried fruits, dried vegetables and apple juices. Healthy Basket is also providing processed organic products

like honey, olive oil, tomato sauce, jams, assorted pickles and Tannour bread. Recently, Souk al-Tayeb, the organic food market promoted the Indian fig (or sobbeir in Arabic), grown in different Lebanese areas and the Kibbeh dish, a famous dish typical of the northern region. Several women cooperatives are engaged in production of traditional foods as an income generating activity for women especially in the rural region of Wadi El Taym Rashaya. These cooperatives were created by some international and local NGOs as conventional processors, and then converted into organic. Today, some trendy novelties such as organic sun-dried tomatoes, capers and pomegranate vinegar are also available.
Reference regarding the quantities produced is not available for all organic products.

1.2.1. Organic certification in Lebanon

The organic sector in Lebanon suffers from the absence of a national legislation and the lack of a legal infrastructure to push it forward. In fact, in 2005, a law on Organic Agriculture was drafted and reviewed by a national committee formed of organic experts, under the supervision of the Ministry of Agriculture. It has been drafted to be in compliance with EEC Regulation 2092/91 with the objective of potential export to European countries and others and it focused on certification, regulation and import and export standards. On the 5th January 2011, the draft law was again submitted to the Lebanese Parliament and is still waiting for final approval.

In Lebanon, “Libnor” is the public institution related to the Ministry of Industry, and responsible for the creation, publication and amendment of the Lebanese standards. The Lebanese Standards for Organic Farming were drafted by Green Line Association with the support of the German Technical Cooperation (GTZ) reviewed by a technical committee at the Lebanese Standards Institution “Libnor” and approved by Libnor’s Board in March 2004. Organic standards are derived from a regulation of the European Community for plants, livestock, beekeeping and food processing, and from the IFOAM’s minimum standards for aquaculture and forests’ management.

Organic certification in Lebanon is performed by two local certifying bodies: LibanCert/Quacerta and IMC-Liban.
LibanCert/Quacerta is the only Lebanese body for inspection and certification in the field of organic. It was established in November 2005 and operates under the umbrella of the American University of Beirut, with the support of the Swiss government and FiBL, the Swiss Research Institute of Organic Agriculture. LibanCert is able to offer certification for all relevant markets including the European Regulation for Council regulations EC 2092/91 and the US National Organic Program. Around 109 organic farming operators (farmers, processors, traders, packagers, labelers..) are certified with Libancert, which is currently offering its services to the neighboring countries such as Syria and Jordan (Sfeir, 2010).
If Libancert is the only Lebanese certification body, it is not the only one to operate in Lebanon. The Italian IMC (Mediterranean Institute of Certification)

gives 74% of the certifications in the Lebanese market, it works under the umbrella of IMC Italy. It is internationally authorized to give certifications to those companies that operate in every sector of agriculture, agro food, restaurants, hospitality, and tourism. All IMC certifications for the organic agriculture are accredited in conformity to IFOAM international standards.

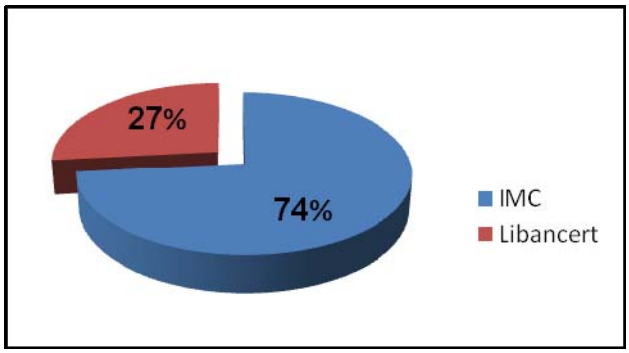

Figure 1. Organic certification bodies in Lebanon

1.2.2.Market of organic products in Lebanon

Organic products are available in Lebanon in supermarkets, specialized organic shops, and in Souk al-tayeb, the farmers' market in Beirut. Some Lebanese producers depend on direct marketing of their products to consumers without resorting to middlemen, as for example some organic farmers offer the possibility of on-farm selling. A general look to prices in supermarkets illustrates that organic product prices range between 30% and 70% more than conventional products prices (Touma, 2002).
BioCoop Lubnan, established in 2001 currently regroups 160 farmers. It is the largest gathering of organic producers in Lebanon and concentrates on coordination in production and marketing activities; of which branding under the common name "Campagnia". It is soon launching an e-commerce system for the purchase of fresh organic fruits and vegetables.

Figure 2. Organic brand (Campagnia) in supermarket chains

Figure 3. Organic Farmers' market in Beirut (Souk al-Tayeb)

Healthy Basket, a program of Community Supported Agriculture, was launched in 2002 by the American University of Beirut and has now developed into a responsible business that adopts a box scheme system for indoor delivery of seasonal organic products. It operates a shop located in the center of Beirut, and participates in a weekly farmers market in Beirut, of which it is a cofounder, "Souk el Tayyeb". HB also exports a weekly consignment of fruits and vegetables to Dubai (Touma and zurayk, 2002).

Organic grocery stores and organic corners in major supermarkets are sprouting across Lebanon's capital. Lebanese organic farmers have considerable choice over where to sell their produce. Just, in Beirut, a range of organic shops, including Healthy Basket, Healthy Corner and Beit al-Soha- the oldest organic shop in Lebanon of over 12 years- offer good business to organic farmers. On the other hand, Lebanon's first farmers' market, Souk el-tayeb, and Souk al-Ard which take place in Beirut, draw large organic-buying (Lee, 2009).
Considering the fact that most of organic shops in Lebanon focus mainly on fruits and vegetables, while outdoor markets that might offer a wider variety usually occur only once a week, owners of organic stores made considerable efforts and implemented new ideas to provide a more diversified supply to Lebanese consumers. In fact, in 2009 an organic grocery shop "a new earth" opened in Achrafieh, Beirut, which provides to consumers all what they can find in a grocery store and in 2010, "Live organic" was established, which is a specialty retail store that offers an all organic body and soul experience through its organic certified products, eco-friendly household items, as well as its organic coffee shop and bakery.

Figure 4. Organic shops in Lebanon

Recently, reports regarding the high levels of pesticides in locally grown fruit and vegetables have sparked food scare among the Lebanese consumers. According to Hattam, (2009) Lebanese consumers are taking the matter into their own hands, starting to patronize organic grocery stores, "healthy basket" delivery services, and restaurants with organic menus in greater numbers than before. A handful of restaurants are also offering organic menus and now catering to a wider audience. Kamal Mouzawak, the founder of Souk al-Tayeb, declared that the clientele has doubled since the pesticides scares.

Until now, there is no data available on organic produce in terms of quantity or value on Import/Export. Products are imported mainly from Italy, France, Germany, U.S.A, Netherlands, Belgium, Brezil, Portugal and Morocco. Imported organic products are mostly sold in health and organic shops, and in some restaurants. Export has a few share in Lebanese organic market and is mainly taking place to Dubai (UAE), and London (UK) as ready-to-eat traditional Lebanese foods. Export of fresh fruits and vegetables has been re-initiated to Dubai (UAE) and Bahrain and recently, some processed products such as rose water and olive oil were shipped to France and Britain.

According to a Lebanese importer of organic products (Rania Kazan), there are different types of consumers who seek to purchase healthy organic food in Lebanon; they are mainly educated people who are aware of health and environmental issues, Lebanese people who live abroad and are acquainted with such products, foreigners who live in Lebanon and are used to consuming organic products in their countries, sick people who have health problems or are on special diets and prefer to eat healthy food, affluent people who can afford to buy organic food, which is more expensive than the conventional one, occasional consumers who try the products due to curiosity and they maintain this eating habit because they enjoyed their first experience, people who are nostalgic to the taste and smell of the fruits and vegetables they used to eat in their villages, and finally consumers who

mainly seek healthy food and don't pay much attention to environmental issues.

1.3.Organic Olive Oil sub-sector in Lebanon

A proud, important part of Lebanon's history and culinary tradition is producing the finest quality olive oil from rich and abundant groves of indigenous olive trees. Lebanon's authentic olive oil tradition dates to Phoenician cultivations in the 3rd millennium BC. Though a small country, Lebanon's diverse topography, microclimates, and olive varieties, produce uniquely flavored olive oils with distinct aromas and tastes catering to the most distinguished palate.
Lebanese olive oil is produced in many different regions around the country. While Koura is probably the best known region internationally, it contains only around 10% of the total land in olive cultivation in Lebanon. There are many other regions that produce high-quality extra virgin olive oil for export: Akkar, Zgharta, Batroun, Chouf, Tyr, Nabatiye, Hasbaya, Marjeyoun, and Rachaya el Fukhar, corresponding to the geographical areas of Lebanon where olives have grown for thousands of years. Actually the Ministry of Agriculture, 2005 stated that from the total agricultural land which is 268.890 (ha), the total olive groves area forms almost 20% share of total agricultural land.

During the year 2009, The Mediterranean Organic Agriculture Network (MOAN) stated that, in Lebanon, the organic olive area was 300.72 (ha), which forms 4% of the total organic land area (9443,70 ha)
Lebanese olive oil is locally sold in tins of 3 liters, small bottles in farmers markets, in tins of 16 kg directly to consumers, bulk as private label to a known brand which sells them in supermarkets, in 500 ml bottles in organic specialized shops. Few restaurants buy organic olive oil and few farmers differentiate their products by mixing it with spices and herbs before selling. Reference regarding the total quantity of organic olive oil produced in Lebanon is not available.

Figure 5. Lebanese organic olive oil in different market channels

In the year 2000, Mr. Chafic Maalouf, owner and general manager of "Olive Harvest", exported a small batch of organic olive oil from his family's olive groves in North Lebanon into the United States at very affordable prices. The unique olive oil was received with great excitement. Shortly after, continuous

shipments started to flow in. Currently, “Olive Harvest” operates more than one hundred acres of olive groves in the fertile Koura region of North Lebanon with a projection of up to 500 acres by the year 2012. During the year 2007, Youssef fares an organic farmer who produces and markets organic olive oil under the brand Zejd defied all predictions by modernizing his family’s traditional oil business and adding flavor to the product (Abi Abdallah *et al.,* 2007). He won the HORECA competition for small-to medium-sized extra virgin olive oil producers, with first place for best commercial brand and best label for his brand “Zejd”. Winning helped his sales abroad, with 70% going to UK, France and USA and the rest sold locally in Lebanon. During the year 2007, Lebanese olive oil was promoted at international food shows. Lebanese olive oil producers and distributors exhibit at many major international food shows and frequently conduct in-store tasting events around the world.

Figure 6. Some Lebanese organic olive oil brands

In Lebanon, the development of organic sector including organic olive oil sub-sector couldn’t be achieved without the efforts of its actual stakeholders and the ones of several local and foreign projects established in order to sustain the organic olive oil production in Lebanon and to increase the resistance of organic farmers against the market challenges that they could face:

- **Middle East Center for the Transfer of Appropriate Technology MECTAD (1982)** played a very important role in promoting the concept of organic farming through publications, lectures and practical demonstrations.

- **Green line (1998),** a Lebanese scientific NGO for the protection of the environment received approval from the German Technical Cooperation (GTZ) for a 2-year project on the "Promotion of Organic Agriculture in

Lebanon". It played a major role through the emphasis on the preparation for the legal framework and the establishment of a certification system. The Organic Farming Committee compiled guidelines for organic production to be used as National Standards which were submitted to Lebanese Standards Institution (LIBNOR) and was following-up the standards with LIBNOR and the Ministry of Agriculture. This project strengthens a potential niche in the agriculture sector suffering from a marketing crisis and supports rural livelihoods sustainably.

- **The American University of Beirut (2001)** implemented the first Community Supported Agriculture program Healthy Basket HB. Supported by FiBl , its aim was to improve Lebanese farmers livelihood in rural areas, preserving the environment and protecting human health by adopting organic agriculture as a key strategy. It helped in providing the women cooperatives involved in the organic food processing with raw material and played a major role as an important outlet of the organic traditional processed products.

- **World Vision Lebanon WVL (2002)**, implemented the Sustainable Agriculture and Rural Development SARD project in Lebanon which is a three-year nation-wide project funded by the United States Agency for International Development (USAID). The project lasted till 2005 and its main aim was to support BioCoop Lubnan, the first Lebanese cooperative for organic agriculture, through strengthening the organic agriculture infrastructure by providing extension, demonstration and training services to BioCoop farmers.

- **The Lebanese Agriculture Research Institute's station LARI (2004)** launched a national project in 2004 which aim was to develop a fruit tree certification system including olives that will, in the future, allow for the production of certified fruit tree seedlings which are true-to-type and with sanitary controls. This project is being supported by the Italian government and executed by LARI with the technical backstopping of the Mediterranean Agronomic Institute of Bari-Italy (one of the institutes of CIHEAM).

- **United States Agency for International Development USAID (2005)** and World Vision celebrated in November 2008 the achievements of a three year project called the Sustainable Agri-Business Initiative for Lebanon Project. USAID helped spearhead organic farming by providing the funding to develop specialized organic agriculture practices, provide state-of-the-art processing, packaging, and storage facilities throughout Lebanon, and put the necessary marketing services in place in order to successfully bring organic Lebanese farm products to the market. Through this project, farmers from Bint Jbeil, East Sidon, Marjayoun, the Bekaa Valley, North Lebanon and Beirut were able to earn organic certifications and sell their produce at higher prices than conventional produce in Lebanon and also in Europe and the Gulf countries.

- **The Association for Lebanese Organic Agriculture in Lebanon ALOA (2005)** played an important role in providing support and enhancing positive interaction among all organic stakeholders in Lebanon and abroad. ALOA constituted a national platform for the Lebanese organic movement defending the principles of organic agriculture, in order to achieve recognition and strategic choice for a sustainable living.

- **Social and Cultural Development Association INMA (2006-2007)** played an important role in expanding the market opportunities of organic olive oil in Lebanon as part of the Expanding Economic Opportunities Project done in collaboration with SRI .It conducted a nationwide contest to determine the best-tasting Lebanese extra virgin olive oil for the 2006-2007 crop and the best presentation for extra virgin olive oil.

Figure 7. National Extra-virgin olive oil contest at Horeca, 2007

- **The Ministry of agriculture MOA and the Mediterranean Organic Institute of Bari (CIHEAM-IAMB)** are jointly implementing the project "Social and Economic Support for the Families and Producers of Olive-growing Marginal Regions in Lebanon" in order to support the olive growers in increasing the quantity and improving the quality of olives and olive oil, to reduce their production cost, to provide solutions to the environmental problems caused by the olive oil mills by-products. In fact, in November 2009, an initiative was launched to promote the Italian technology for the management of the olive orchard in Lebanon. In January 2011, the project "L'Olio del Libano" presented the new product of 2010 olive oil season: early olive oil and olive oil soaps made in Lebanon. The three olive oils, coming from the project areas of Akkar-Minieh, Hermel and Marjeyoun, stem from a scrupulous selection of the olives picked from the demo fields of the project and from other neighbouring plots. The olives harvested in compliance to environmentally-friendly procedures of the Good Agricultural Practices (GAP) were analyzed for chemical parameters and by a panel test. The results were reported on the back label to let the consumers be aware of the excellent value of the Lebanese extra-virgin olive oil. Nowadays, efforts are being done to promote the Lebanese organic olive oil branded

under the common name “L’Olio del Libano” in the Lebanese restaurant channel.

Chapter 2

Literature review

2.1. Restaurant-selection preferences of consumers

The recent increase of dining out trend sways the consumers' choice on which type of restaurant to be visited. Few studies discussed previously the restaurant-selection preferences of consumers and suggested that several variables affect the consumer behavior and attitudes towards restaurants choice. The considerations of individuals in the decision making process were different and showed to be related both to the restaurants characteristics from one side and to customers' socioeconomic and demographic characteristics from another side. In the following paragraph of literature review is included an overview of the factors that might affect consumers' choice of restaurant, which are synthesized from previous work.

The perceived importance of the reasons for patronizing restaurants varies by factors that define an older persons' socioeconomic environment and demographic characteristics. It is believed that *age* and *gender* have a considerable effect on determining the consumers' choice for restaurants. "According to a nationwide survey conducted by The National Restaurant Association, younger adults are more likely to use restaurant service than older adults and men are more likely to use this service than do women (Kennedy *et al.,* 2003). The presentation of food is an important factor that influenced women in their choice of restaurant and meal. Women are more concerned than men with how a meal appealed to them aesthetically. In contrast, men stress a preference for a full plate of food rather than aesthetic appeal (Potter and Williams, 1996).
Also, with respect to age, Moschis *et al*. (2003) considered that mature consumers are an attractive group for hospitality marketers, and that members of this group generally prefer to spend their money to purchase experiences rather than things. A random survey of 2,082 adults of which 1,436 respondents (69 percent) are age 55 and over was carried out in the United States in order to study the decisions that mature Americans make regarding purchases at restaurants, and what considerations or factors are used to reach such decisions. As a result, several factors related to restaurant characteristics were stated as significant motivators like: *Availability of discounts, restaurants as comfortable places to socialize, proximity of restaurants to homes or workplace, peer recommendation, restaurant's location near other places like supermarkets or churches, restaurant's personnel, ease of locating menu…*
Another variable discussed in literature is the consumers' *income level* which showed to be directly linked with their behavior in restaurants. Kennedy *et al*. (2003) stated that gains in real disposable income have led consumers to spend more of their food dollars in restaurants and growth in sales, particularly in casual-dining restaurants, is also driven by the number of higher income household, while Moschis *et al*. (2003) considered that ease of locating items on the menus as well as the importance given to discounts

offered by the restaurant become less important with increased income and age.

Moreover, the importance of restaurant location was also discussed in literature; The *restaurant location* is critical to success in restaurant industry; today's harried consumer is looking for convenience and desires to package multiple purposes for any visit (Kennedy and Way, 2003). Restaurants close to home were more likely to be patronized because of time and convenience. For a family with young children, for example, dining-out was considered a 'huge effort'. For them restaurants are chosen on the basis of proximity to home, a relaxed atmosphere, and catering for the needs of both children and parents. Older males were concerned with giving the wife a break from cooking (Potter and Williams, 1996). However, *restaurant location* becomes less important with age, suggesting that working people may value restaurants located near their workplace (a factor that is not so critical for retired people. With age, mature people are less likely to choose restaurants because of their proximity to other establishments they patronize (Moschis *et al*., 2003).

Some consumers considered that *standards of hygiene* were of great importance for their restaurants' choice decisions. In fact, hygiene standards create the initial impression of a restaurant, thus they are highly relevant to consumers. Poor hygiene standards prompted customers to quickly turn away from the restaurant. The personal hygiene of waiters and waitresses was a very visible part of the consumer attitude to overall restaurant hygiene (Potter and Williams, 1996). Also, *restaurant personnel* may function as opinion leaders, capable of transmitting new information to diners about food and possibly influencing their tastes and preferences (Inwood *et al.,* 2009). Assistance from restaurant personnel also become decreasingly important with age (Moschis *et al*., 2003). In addition to the variables mentioned previously, other considerations like *consumers' satisfaction, consumers' attitude, consumers' loyalty* and *consumer purchase intentions* showed to play a major role in understanding the consumer behavior in restaurants. A study was done in Malaysia by Wan Halim and Hamed, 2005 in order to examine how the individual consumers' attitude, satisfaction and loyalty are correlated with their purchase intentions at traditional restaurants and fast food restaurants; where it was considered that "consumers' attitudes towards restaurants food are determined by food attributes that influence their purchasing decisions" and that "In the restaurant industry, customers' level of satisfaction is strongly associated with repeated purchase intention and return patronage". Customers' loyalty was defined as "the degree to which customers has exhibited repeat purchase behavior of a particular company product and service". The result of the study indicated that the customer loyalty was the most significantly and positively variable that is explaining the variance in the purchase intentions of the consumers for both types of restaurants, thus, as the extent to which a customer patronizes the restaurant and desires to maintain an ongoing relationship with their particular choice of restaurant, it was expected that the customers loyalty would become a key determinant of purchase intention in restaurant industry.

2.2.Consumers' food-selection preferences at restaurant

The meal experience represents a moment in the everyday life of human being and individuals have their own experiences of meals. Different people select different types of food in different types of restaurants. Literature upon which we were based showed that, while choosing a particular type of food, many factors could affect the restaurant consumers and have influence on their final decisions.

At first insight, consumer choices over restaurant menu items are guided by the economic factors that condition all their decisions like *price, price of substitute products, income, and tastes and preferences*. Also, these factors showed to have an impact on the consumer decision to dine out and to select a restaurant (Patterson *et al.,* 2002). In fact, Lillywhite *et al.* (2008) found that *price* is the primary factor determining consumer choice for restaurant menu items. However, as demographics change and incomes increase, consumers may demand different attribute bundles from their food. According to Kennedy *et al. (*2003) consumers are becoming more value-conscious, which is a reflection of their current economic situation. Consumers are now expecting *better values of price paid*, *restaurant service consistency* and *food quality*. Potter and Williams, 1996 found that quality food at a reasonable price appears to be a very important factor in choosing a restaurant and in making a choice from the menu.

On the other hand, Potter and Williams, 1996 studied the consumers motives for choosing restaurants and for choosing meals in restaurants and found that choosing a restaurant depends primarily on the food people feel like at the time. Restaurants that offered a style of food based on ethnic origin, for example Chinese, Thai, Lebanese, Italian, traditional British or Australian foods influenced the choice of restaurant. Often, the restaurant was selected by friends and family who had particular preference, or who had been there before. *Food preference,* in turn, was often based on a whim. Consumers inferred that they were guided by a *state of hunger or moods at the time of eating*. Some consumers used restaurant meals as an *opportunity to experience new tastes* and to provide variety and a balance in the overall diet. Others acknowledged what could be called a *safety factor* as a force guiding their choice of meal. These individuals often choose a particular dish on the basis of *previous experience* or *recommendations of family members or friends.*

Moreover, Jaeger *et al.* (2009) added that to understand the reasons for particular food choices*,* the context in which these choices are made is important. In order to understand this *situational dependency*, a study was carried out investigating one specific consumption situation and the influences on it: purchase of wine to be consumed "while eating a meal with friends in a restaurant". The importance of 13 wine selection influences (or wine choice factors) specific to the focal occasion was measured among a random sample of 212 of adult wine drinkers in Auckland, and the findings showed that the wine selection influences "*grape variety*" and "*geographical region*" are of greater importance among people who are highly involved with wine.

Jensen and Hansen (2007) indicated that some other types of factors could affect the consumers' food choices in restaurants like *information search, consumer value set, attitudes towards enjoyment, and practical expectations.* In fact, they stated that consumers have their *own set of values* which orientate their preferences for food in restaurant. "The preference aspect includes the assumption that consumers purchase products and services because they want to achieve value-related goals or benefits; Such as when consumers buy products that will make them appear young and trendy, which is preferable to appearing old". Based on the variety of human experiences, products and their values can obviously have different meanings for different persons. In fact, the variety in consumers' considerations could lead to different value-related decisions and so, it might differentiate between the types of restaurant patrons seeking different needs and having different interests: "According to research by C&R Research for the National Restaurant Association, there are four broad food attitude segments among today's restaurant patrons: *Adventurous diners,* are consumers who are most enthusiastic about trying new types of foods and ingredients; They are frequent diners who are educated and more likely to live in urban areas. *Traditional diners,* are the least experimental and tend to live in smaller cities; They are often older, less frequent patrons who enjoy comfort foods. *Health-conscious* diners, are more concerned about what they eat when dining out; They make food choices based on health concerns as well as specialized diets such as vegetarian, kosher and high protein/low carbohydrate and finally *Carefree diners*, are the opposite of *health-conscious diners* and want to forget about eating healthy; These consumers are typically males under the age of 50" (Kennedy *et al.,* 2003).

2.3. Dining-out trends

Trends in the restaurant industry are constantly evolving linked to the variation of both customers types and the global environment surrounding them and making changes in their values, thus in their food choices. In this context, the following paragraph discusses how these pre-cited changes influenced the consumers considerations for food choices, and so, it exposes the different orientations of dining-out based on studies carried out on a worldwide level.

First, according to Lillywhite *et al.* (2008) changing consumer attitudes towards environment, animal welfare, food safety, food quality, and personal health is boosting demand for locally produced food products. Increasingly consumers are concerned with understanding the food marketing system and knowing where their food has originated. This conclusion was reached after the elaboration of a study on 322 consumers in 303 restaurant diners (The U.S. southwest). The study attempted to investigate the effect of three different factors: *The average meal price*, the *restaurant type* (chain versus local), and *the use of locally grown ingredients* (local ingredients used or not used) on the consumers' food choices among restaurants, where results showed that consumers did consider a restaurant's practice of "buying locally" in their choice of eating out and showed an increased willingness to

pay for locally grown ingredients with the increase of their disposable incomes.
According to Sandalidou *et al.* (2000) nowadays, people throughout the world, especially those with a high standard of living, seem to prefer foodstuffs that are produced and processed by natural methods. In addition, Gavruchenku *et al.* (2003) considered that nowadays consumers are interested in ecologically clean products due to health and environmental reasons as well as the increasing concern of safe and quality food.
Healthier food is an important issue in the restaurant sector (Shubert, 2008). As health promotion has evolved from a major focus on individual change toward a greater focus on the environments in which people live, work and recreate, restaurants are now being targeted as appropriate organizations for change. In this context, Potter and Williams, 1996 studied the Australian consumers attitudes towards Healthy restaurants which are known to provide healthy food choices, smoke free dining areas and good standards of food hygiene in order to estimate the consumers' views about using restaurants as a setting for health promotion and, specifically, for providing low-fat healthy food choices. The results of the study indicated that consumers showed interest in *Healthy restaurants*, specifically females consumers, people concerned with fitness, overweight people, people on dietary constraints for health reasons, and finally the image-conscious consumers.
Moreover, Shubert (2008) found that with the increasing awareness of global climate change and natural disasters, environmental protection is an issue of high topicality and relevance and this is also true for the hospitality and tourism industry where businesses often rely on the integrity of the environment. Employing and marketing green practices, could help restaurants to establish a new niche for environmentally concerned customers, and therefore increase sales and long-term profits. In fact, restaurants who exhibit strong interest in environmental issues and actively participate in eco-friendly practices could distinct themselves from other businesses, hence creating a significant competitive advantage.

2.4.Organic food in restaurants

Remarkably, adequate empirical documented studies linked to the consumers of organic food in restaurants as well as the restaurateurs' perspectives on the adoption of organic food are still very limited in literature. In this paragraph are discussed in a synthetic way some factors which could affect positively or negatively the consumers and the restaurant managers to have organic products in the restaurant.
Dining out organically has become a popular trend globally. Today, organic consumption is associated not only with health concerns, but also with social, economic and environmental sustainability (Poulston and Yiu, 2011). According to Shubert, 2008 several restaurants have recognized the need for healthier food and implemented the usage of local or organic foods as well as healthier food preparation techniques. Previous studies have reported that more and more consumers appreciated and rewarded firms that show strong environmental and social responsibility and were willing to pay premium prices for such services.

"The Global Strategic Business Report (Global Industry Analysts, 2006) stated that the USA, Germany, Great Britain, Denmark, Italy, and Austria are world leaders in the trend of eating organically and have developed well-structured markets catering to organic food consumption" (Poulston and Yiu, 2011).

Also, it was found that consumers' motivations to demand eco-friendly food products including organic ones in restaurants are different and are mainly oriented by their *personal concerns and interests.*

First, some consumers might be attracted to organic foods in restaurants by considering these products as *healthier* than conventional ones. "Health is the most important motive for consuming organic food, because organic food is considered healthier than conventional food". A survey sponsored by the Produce Marketing Association in the USA showed that 35% of respondents were more likely to order organically grown menu items when dining out and around 50% of Americans sought healthier menu items. However, the other half were skeptical about the benefits of purportedly healthy menus, and about a third were not concerned with nutrition when dining out. The report concluded that just under half of restaurant diners planned to eat more organic food in the future" (Poulston and Yiu, 2011).

Other consumers could have *environmental considerations* and are interested in the production practices of organic products leading to the sustainability of the environment and ecological systems. Shubert (2008) concluded that the following demographic factors: *gender, age, race*, *education, income and frequency of dining out*, could affect the consumers' behavior towards environmental protection. In fact, since people with higher educational attainment likely know more about environmental issues and their importance, in general they should also have higher attitudes towards eco-friendly practices. Also, while a person is more likely to engage in green behaviors with increasing education and income, the older a person is, the less likely he or she will engage in environmental protection. Other demographics have been found to exert influence such as *ethnicity, religiosity, and gender.*

Simultaneously, *food quality* is known to be one of the most important concerns affecting the consumers' preferences to organic products. Under quality, the consumer considers attributes such as "cosmetic quality", "nutritional value", "hygiene" and "taste", all of which leads the consumer to make a decision to purchase organic and non organic alternatives. Consumers rank organic products higher than non organic products when they consider the cosmetic quality of the product. Similarly, with respect to nutritional value, hygiene and taste, consumers always rank organic alternatives over non organic alternatives. When the quality sub criteria (cosmetic quality, nutritional value, hygiene and taste) are evaluated together, the consumers rank nutritional value over the other three attributes. Their ranking for hygiene comes second; taste comes third and cosmetic quality (Akgüngör *et al.,* 2007)

Although several factors could motivate the restaurant consumers to dine organically, "The Consumer Foodservice New Zealand Report revealed that interestingly, in both the USA and New Zealand, the *price* of organic food is considered the main barrier to increased consumption" (Poulston and Yiu,

2011). In addition some consumers *do not believe* that organic agriculture can improve food security and some others *do not know* what an organic product is. That is why there is a need for better access to market information (Sandalidou *et al.*, 2000)

Moreover, differences in the perceptions of restaurateurs of different types of restaurants were marked. An exploratory study was carried out by Poulston and Yiu (2011) in order to investigate the restaurateurs' views on the concept of organic dining, and their motivations for entering the organic food service sector. The study included a small sample of restaurants offering organic menus and found that although most participants were motivated by their green values, these values are not a pre-requisite for entering the organic sector. It was also shown that a marked difference exists between the views of the restaurateurs of the up-scale restaurant, and those of the mid-scale cafes where the first showed a "Profit first" approach seeing organics as just another food fashion, and had no commitment to the concept other than as something to offer customers who have already tried everything else. On the contrary, the mid-scale participants integrated their societal and environmental beliefs with their business goals. They therefore prioritized profit generation in order to survive in an under-developed market, and suffered short-term financial losses to maintain their green beliefs. They were optimistic about the organic dining trend so had faith in their ability to pursue profit, environment protection and consumer satisfaction concurrently, sometime in the future.

Moreover, true organic restaurateurs not only face challenges from those who attempt to capitalize on the organic dining concept, but also the *low market demands* for organic dining that make it difficult for them to survive (Poulston and Yiu, 2011). Finally, *poor government support*, *supply difficulties*, *price premiums* and *poor market demand* were identified by participants as barriers to the development of organic dining (Inwood *et al.,* 2009).

2.5.Consumers' attitudes towards organic olive oil

Olive oil is an agricultural product of great nutritional value due to its organoleptic and biological properties as well as its taste characteristics. Even though olive oil has won a privileged position in human nutrition, due to its biological and nutritional features, organic olive oil is a chemical-free product, which satisfies better the customers demand for quality food (Sandalidou *et al.,* 2000) .

With respect to the use of olive oil in the restaurant cuisine, Voulgaris (2009) stated that high quality extra-virgin olive oil is a simple way to add depth and tremendous flavor to meals while keeping them extremely healthy, also he added that maintaining a competitive advantage and keeping menus current to reflect consumer demands, tastes, and trends, is a necessity of restaurateurs.

Since studies discussing the consumption of organic olive oil in restaurants are still missing from literature, the following paragraph shows the results of two previous researches which studied the consumers attitudes towards organic olive oil provided by other market channels, and which demonstrated

that consumers perceive organic olive oil differently based on a set of criteria in which they show different levels of interest or satisfaction.

Table 2: Different methodological approaches on relevant studies

Source	Method	Respondents	Product	Explanatory variables
Sandalidou *et al.,* 2000	Survey (Qualitative approach)	131 Organic consumers in supermarkets (Greece)	Organic olive oil vs. conventional olive oil	Health Price/Quality Packaging Specific characteristics Promotion and disposition
Gavruchenku *et al.*, 2003	Survey (Quantitative approach)	769 respondents in Greece and 556 respondents in Holland	Organic olive oil	Health Quality Packaging Pricing Naturalness.

As shown in the table 2 above, studies were based on questionnaires and used both quantitative and qualitative approaches. The samples were relatively small and data was collected in different organic market channels (organic food stores, supermarkets or others) mainly in Greece and Holland.

In the comparative study undertaken by Sandalidou *et al.* (2000), organic olive oil consumers in 2 supermarkets in the region of Thessaloniki in Greece were asked to express their evaluations for a suggested set of criteria concerning both organic olive oil and conventional olive oil; *Health* (the degree that the product contributes to people's health), *price/quality* (how expensive/cheap the product is in relation to its quality), *packaging* (packaging material, capacity, label information, practicality, resistance and image), *specific characteristics* (color, flavor and taste) and finally *promotion & disposition* of the product (information & advertising, availability& access). It was found that in general customers seemed to be more satisfied from organic olive oil, more specifically, they seemed to prefer organic olive oil in terms of health and its specific characteristics: color and taste. Consequently, health was considered to be a competitive advantage of organic olive oil. On the other hand, customers found conventional olive oil to be better packaged and promoted and have lower price related to its quality. In fact, customers were very satisfied from the availability of conventional olive oil and the access to it, due to its established distribution network. The study concluded that the *inefficient distribution* channels along with the *limited available information* were the main weaknesses of the organic olive oil.
Another study carried out by Gavruchenko *et al.* (2003) examined Dutch and Greek consumers perceptions and attitudes regarding organic olive oil. Consumers were asked to provide their opinions of some characteristics of organic olive oil: *health, quality, packaging, pricing and naturalness.* Quantitative data of purchasing and non-purchasing behavior, purpose of

usage, knowledge and attitudes towards organic olive oil and willingness of consumers to pay a higher price than conventional olive oil were selected. The study results showed that consumers' positive purchase decisions are closely related to their sensitivity on diet issues. The majority of Greek respondents believe that organic olive oil is a *natural product, healthier than conventional olive oil, additive and chemical residue-free, pure and environmentally friendly* while the majority of Dutch consumers believe that it is environmentally friendly and chemical free. However, the main reason for not buying organic olive oil in Greece was *the lack of knowledge* where to find it, while for Holland the main reason was the *high price*, and again, *not knowing where to find it*. Also, the willingness to pay for organic olive oil was different between Greek and Dutch consumers where it was noted that the first know that better quality requires a higher price and the majority 71.6% of the population is willing to pay up to 50% more than for conventional olive oil while 32.6% of Dutch consumers are willing to pay a higher price, and14% of them are willing to pay less. Also it was noticed that consumers with higher income are willing to pay a higher price for organic olive oil. From another hand, *promotion and disposition* seems to be the greatest weakness of organic olive oil.
Gavruchenko *et al.* (2003) noticed that many problems are created in the distribution of organic products due to the *non-existence of distrib*ution *channels* and the *negative opinions of retailers* as regards the promotion of organic products along with others, and so, recommended that the selection of optimal channels for distribution have to offer better access to the product. Finally, Sandalidou *et al.* (2000) stated that for a successful penetration of organic olive oil into new markets, a continuous improvement is required.

2.6. Restaurant sector in Lebanon

Dining in Lebanon is a social event. Meals are eaten family-style, shared amongst friends. This practice is embedded in the culture of the entire region, a part of daily life, an act of hospitality inherited from the many cultures who contributed to the dynamic lifestyle of the Lebanese people. In Lebanon, it is probably the best country to enjoy it, since it is believed that one thing that unites all Lebanese is the love of eating (EL-Khazen, 2010). Following the end of the war in the early 90's the market for restaurants witnessed rapid growth, where Lebanese cuisine was highly demanded by the returning expatriates and the tourists. The restaurants market developed quickly in Lebanon not because of the Lebanese consumer's purchasing power but because Lebanese people like to go out in places where they can meet people and enjoy good food.
According to the AFC Consultants International, the growth in the restaurant sector was led by a number of factors, among which:

- The Lebanese returning expatriates as well as the increasing number of visitors from Arab countries and Europe that are used to high standards in restaurants and related services. In fact, in

October 2010, the BLOM INVEST Bank stated that Lebanon recorded the highest worldwide tourists' arrivals growth rate in 2009 and is expected to break its record in 2010.

- The Lebanese consumers like to go to restaurants as a way to socialize, join friends or meet people as part of their lifestyle
- The increasing demand from business people including journalists, politicians, bankers, insurance, etc… have changed the services and standards in restaurants.
- Diversity in choices of restaurants, which in turn generates increased demand.
- The continuous opening of new concepts including a variety of ethnic foods, in the past, people used to make all their invitations at home, but nowadays more and more people organize their invitations at restaurants.

Table 3: Restaurants in Lebanon

Total	1125
Lebanese restaurants serving Lebanese traditional meals	503
International Restaurants serving International meals	622

Source: websites: BeirutRestaurants.com; Restaurants@Lebanon.com

Table 3 shows a diversity in restaurant styles and types in Lebanon which became a basic criteria distinguishing the Lebanese dining habits and thus playing a major role in the attraction of tourists. Several restaurant styles are present in order to meet different local and international food demand of customers, from which we can mention Lebanese, Italian, Japanese, Mexican, Moroccan, Chinese and others.

The Lebanese gastronomy is a rich mixture of various products and ingredients coming from the diverse Lebanese regions. Typical Lebanese ingredients are: olive oil, herbs, spices, fresh fruits and vegetables, cereals, fishes and various types of meat. Typical Lebanese food are for example the traditional Mezze (Meza), mix of hot and cold dishes, and salads like Tabboule and Fattouch. In restaurants serving traditional Lebanese food, meals usually include mezzes, as the savory beginning to a following traditional meal which could be: kibbeh (minced lamb, bulgur wheat, onions, pine nuts prepared in different ways), half of a chicken with rice, grilled chicken or lamb on skewers, or fish served with tahini sauce.

Figure 8. Olive oil in Lebanese restaurants

Olives and olive oil are essential components of Lebanese cuisine. In a country where most households purchase olive oil from the same supplier every year, making one's mark as an olive oil producer is no easy task, especially in the North. Lebanese olives and olive oil are vital ingredients in any meal, morning, noon or night. Without them no table would be complete (El-tayeb, 2007).

Figure 9. Lebanese traditional food prepared in Souk-el-Tayeb

Few restaurants provide traditional diets prepared with organically grown ingredients. "Tawlet Souk el Tayeb" as example is an open kitchen where everyday a different producer/cooker prepares typical food from his/her region. According to Y. Fares (pers. comm) there is no organic restaurants but few restaurants are providing organic menus. "Shtrumph" is one Lebanese restaurant that has implemented a "GO GREEN PROGRAM" which consists on the use of organic ingredients while cooking the main dishes. This program is done one day by week and showed to be highly encouraged by customers.

Chapter 3

Materials and methods

3.1. Methodological approach

Earlier researches done mainly in Europe and U.S.A, which are already exposed in the literature review paragraph, conducted exploratory surveys to investigate the customers attitudes towards restaurants' choice as well as meals' choice done at the restaurant.
The aim of our study is to explore the market potential for organic olive oil in the restaurant channel in Lebanon. In order to reach our goals, the survey was chosen as an instrument for obtaining the necessary data. Exploratory survey may be conducted to obtain greater understanding of a concept or to help crystallize the definition of a problem (Aaker et al, 2001).
Both quantitative and qualitative information were targeted. Quantitative methods characteristically refer to standardized questionnaires that are administered to individuals which are identified through various forms of sampling; usually random sampling. Sampling allows the results to be considered representative, comparable, and generalizable to a wider population (Dudwick *et al*., 2006). Qualitative methods seek to understand a given research problem or topic from the perspectives of the local population it involves and qualitative research has the ability to provide complex textual descriptions of how people experience a given research issue. It provides information about the "human" side of an issue. When used along with quantitative methods, qualitative research can help to interpret and better understand the complex reality of a given situation and the implications of quantitative data (Mac *et al*, 2005). The respective strengths and weaknesses of qualitative and quantitative approaches are largely complementary, that is, the weaknesses of one approach can be compensated for by the strengths of the other. Qualitative tools can be used to explore issues of process and causality that cannot be inferred from quantitative data alone. Qualitative methods also allow unanticipated responses and issues to arise (Jones and Woolcock, 2007).

3.2.Survey sampling procedure

The survey was conducted during April 2011, in the city of Beirut, the capital of Lebanon. The capital Beirut was chosen because it offers a diversified sample of restaurants clientele from all the Lebanese regions, and also from outside Lebanon having different dining out habit. In addition, the restaurant sector in Beirut showed to be highly developed where a multiplicity of restaurants types, styles and concepts are found providing a wider possibility for selection. Among this diversity of restaurants, we chose to conduct the survey at Lebanese restaurants offering traditional Lebanese cuisine where the olive oil is used as an essential condiment for the meals provided.
In addition, we aimed to select restaurants based on their average meal price differentiating them into two main categories: Expensive restaurants (where the average meal price is higher than 40$) and less expensive ones (where

the average meal price is lower than 40$). For this reason the selection was done referring to the website: *BeirutRestaurants.com. which* provided a high number of restaurants (almost 1,125 restaurants).
Effective quantitative research usually requires a large sample size. However, lack of resources sometimes makes large-scale research impossible. In such cases, qualitative methods can be used with smaller samples to provide insights into a development question (Dudwick *et al*., 2006). Therefore, in order to accomplish the restaurants survey in the given period of time of one month, it was necessary to reduce the sample size. Consequently, only 20 restaurants were selected; 10 expensive and 10 less expensive, located in neighboring districts inside the capital. These districts were mainly the Downtown, Achrafieh, Gemmayzeh, Horch Tabet and Zalka.

Table 4. Location of the selected restaurants

Location	no.	%
Achrafieh	6	30
Gemmayzeh	3	15
Horch Tabet	4	20
DownTown	3	15
Antelias	2	10
Zalka	1	5
Jal el dib	1	5
Total	**20**	**100**

As it was mentioned before, the aim of our study is to explore the market potential for organic olive oil in the restaurant channel in Lebanon. So, for each of the 20 restaurants chosen, the manager was interviewed in order to investigate his interest in serving organic olive oil. At the same time, customers were selected randomly and asked to participate in the survey in order to be able to study their interest in consuming organic olive oil in the restaurant.
For the customers survey, a non probability sampling method was adopted. Non probability samples are those where the chances of selection for the various elements in the population are unknown. A total of more than 600 customers were asked to participate in the survey. However, 400 customers responded effectively to our questions and were collaborative in sharing their opinions related to the customers questionnaire.

3.3. Restaurant customers survey

In the following paragraphs are described in details the materials and methods used for the restaurant customers survey related to the design of the research tool, data collection, the descriptive analysis for the characterization of restaurant customers and the logistic regression analysis for the evaluation of the willingness to pay.

3.3.1. Design of the research tool

In order to achieve the goals of the restaurant customers research, a standardized questionnaire in English was designed (Annex 1). A questionnaire is said to be standardized when each respondent is to be exposed to the same questions and the same system of coding responses (Siniscalco and Auriat, 2005). A questionnaire is used to ensure an orderly and structured approach to data gathering (Aaker et al, 2001). Among the types of information that can be collected by means of a questionnaire are facts, activities, level of knowledge, opinions, expectations, attitudes and perceptions (Siniscalco and Auriat, 2005).
Questions composing the questionnaire were elaborated in a way to meet the objectives of the study and to get deeper insight into customers' attitudes towards the consumption of organic olive oil in restaurant. In the development of the questionnaire, it was possible to draw upon previous work and similar surveys done in Europe and U.S.A. The questionnaire was developed; after several discussions in order to first identify what kind of information do we need to know from respondents to meet the survey's objectives, therefore to formulate the questions and elaborate them in a way to be easily understood by customers avoiding ambiguous, offensive, implicit, leading and long complex ones.
Depending on the type of information being asked and the available knowledge from literature, closed, open, dichotomous and scaling questions were asked. The questionnaire is composed of two main parts containing in total 21 questions. The first, is a screening part designed to understand the customers dining out preferences and to investigate their knowledge about organic products. The second part is addressed only for respondents who know about organic products investigating their purchase behavior and their attitudes towards the consumption of organic olive oil at restaurants.

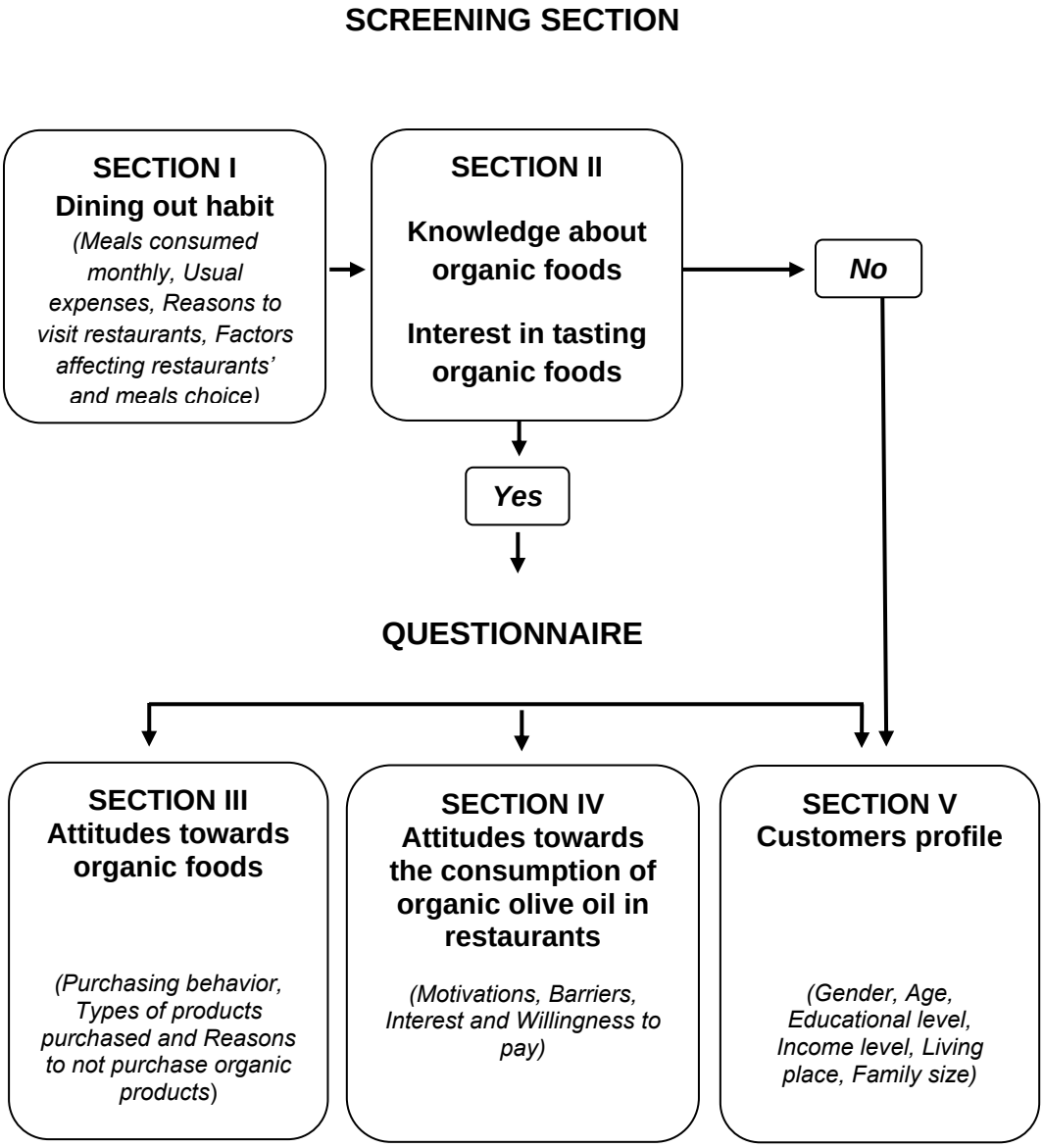

Figure 10. Structure of restaurant customers questionnaire

The screening part of the questionnaire is formed by two sections: the Section I which served to determine the restaurant customers dining out habit, and the Section II served to recruit customers who know about organic products, to evaluate their level of knowledge and finally to know if they are interested or not to taste and learn about organic products in the restaurant.
And so, the screening part was composed by a total of 8 questions belonging to different types:

Section I:
This section is composed of 5 questions representing the customers dining out habit:
• Number of meals consumed monthly at the restaurant (closed question/single response)
• Usual expenses at the restaurant (closed question/single response)

• Reasons to visit the restaurant (closed question/multiple response)
• Factors affecting consumers' decisions about the restaurant choice (scaling question)
• Factors affecting consumers' decisions about food choice at the restaurant (scaling question)

Section II
This section is composed of 3 questions regarding the consumers knowledge about organic products and their interest to consume these products in the restaurant :
• Knowledge about organic products (dichotomous question)
• Interest to taste and learn about organic products in the restaurant (dichotomous question)
• Defining organic products (open question)

The questionnaire administered to respondents who know about organic products is composed of 2 other sections:

Section III
This section is composed of 2 questions and is devoted to investigate the customers purchasing behavior of organic products, interest to purchase organic products, reasons to not purchase organic products and types of oils consumed at home.
• Purchasing behavior of organic products, interest to purchase organic products and reasons to not purchase organic products (closed question/multiple response)
• Types of oils consumed at home (closed question/multiple response)

Section IV
This section is composed of 5 questions investigating the customers attitudes towards the consumption of organic olive oil in the restaurant:
• Reasons to have organic olive oil in the restaurant (scaling question)
• Factors affecting positively the customers decisions to have organic olive oil in the restaurant (scaling question)
• Factors affecting negatively the customers decisions to have organic olive oil in the restaurant (scaling question)
• Interest in consuming meals prepared with organic olive oil in the restaurant (dichotomous question)
• Willingness to pay for organic olive oil in the restaurant (closed question/single response)

Section V
The last part of the questionnaire was designated to all the customers and describes their typology. This section is formed by 6 different questions which represents the restaurant customers socio-demographic profile:
• Gender
• Age
• Educational level
• Income level

• Country of origin and place of living
• Family composition

3.3.2.Data collection

Survey research involves an interviewer who interacts with respondents to obtain facts, opinions, and attitudes (kullaj, 2007). Due to the multiplicity of questions of interest and the absence of a team work, data collection for the customers survey was done by using a combination of two methods: oral interviews (face-to-face interviews) or self-administered questionnaires. The choice of one of these two methods was related to the time provided by the manager of each restaurant to be in contact with the customers, and to their advices about the best way to get in contact with people dining at their restaurant (kullaj, 2007).
The questionnaire was tested on a small sample of customers in order to check for ambiguous questions, poor instructions or response options not included. Thus, while pre-testing can identify and correct questions that are clearly suited to a given research objective, the limitations of context remain (Dudwick *et al*., 2006).
The sections I, II and V of the questionnaire were filled by the total number of respondents (N=400 respondents), while only customers who know about organic products (N=313 respondents) filled the sections III and IV of the questionnaire. Even though the questionnaire was tested and customers were assisted, confusions took place in the question 7 related to the customers interest in tasting organic products in the restaurant. Therefore, 65 persons didn't answer to this questionnaire.

Figure 11. Restaurant customers filling the questionnaire

Figure 12. Restaurant customers being assisted

3.3.3. Descriptive analysis for the characterization of restaurant customers

The data of the questionnaire has been transferred into a database in Microsoft Office Excel, 2007. For the construction of the database, a coding frame was elaborated giving for each question a number related to the respondents' answers. For dichotomous questions, the number 1 referred to the answer YES while the number 0 referred to the answer NO. For the scaling questions formed by five ordered levels, the Likert items used ranked from -2 to 2 (-2= Strongly disagree and 2= strongly agree). For closed questions with multiple responses, the answers were numbered as 1 or 0 considering each choice as dichotomous YES/NO, and so, the number 1 is used when the respective item is selected by customers, and the number 0 is used when the respective item was not selected. More
precisely, 1 referred to YES and 0 referred to NO. Blank cells in the database referred to cases where the customers didn't respond to the respective question.
For the characterization of restaurant customers, a descriptive analysis was used. Data were processed by creating descriptive tables of frequencies and graphs for the questions included in the questionnaire. The paragraph (4.1.) of the chapter 4, is devoted for the description of the customers sample related to their socio-demographic characteristics, dining-out habit, knowledge about organic products, purchasing behavior of organic products, motivations and barriers to purchase organic olive oil at restaurant and willingness to pay for organic olive oil.
For the Likert scale questions, customers were asked to specify their level of agreement to each answer by giving a Likert item varying from -2 to 2. The evaluation of this type of question was done by comparing the average score which was calculated for each answer. The level of agreement of respondents to the answer was evaluated by comparing the average score related to each answer to a level of neutrality that has a score of 0. And so, positive values indicate that respondents agreed with the statement while negative values indicate that respondents disagreed with this statement. Finally, a score of 0 indicate that respondents neither agreed or disagreed to the statement proposed.

3.3.4.Logistic regression analysis for the evaluation of the willingness to pay

The scope of this paragraph is to describe the methodological procedure adopted by this study in order to identify and analyze the factors influencing the customers' intended purchase of meals prepared with organic olive oil in the restaurant. Two types of analysis were elaborated to better understand and interpret the customers' behavior:

1- A descriptive analysis, which represents the socio-demographic characteristics of the selected sample of restaurant customers.

2- An econometric analysis, which evaluates the customers willingness to pay for meals prepared with organic olive oil and identifies the factors which can affect positively their decisions to pay for it in restaurants.

To accomplish the analysis of the characteristics that affect positively the willingness to pay for organic olive oil in the restaurant and identify which dimensions of the sample increase the likelihood for a higher WTP, a logistic regression model was used.
In fact, regression is a statistical procedure which attempts to predict the values of a given variable, (termed the dependent, outcome, or response variable) based on the values of one or more other variables (called independent variables, predictors, or covariates). However, numerous forms of regression have been developed to predict the values of a wide variety of outcome measures (Guido *et al*, 2006). Therefore, the type of regression used is dictated by the type of response variable and by the analytic goal. The logistic regression procedure is intended for the modeling of dichotomous categorical outcomes. This method focuses upon the relative probability of obtaining a given result category (Guido *et al*, 2006). It is a multivariate technique which allows for estimating the probability that an event occurs or not, by predicting a binary dependant outcome from a set of independent variables (Vasisht, 2000).
Regarding our study, the dependant variable (WTP) is dichotomous which assumes the value 1, when the consumer declares a willingness to pay more for meals prepared with organic olive oil than for meals prepared with non-organic one, and the value 0, when the consumer is unwilling to pay more for organic olive oil. The independent variables are related to three groups of variables: customers' behavior at restaurants, consumption at home and socio-demographic characteristics.
Thus, the formal specification of the model used is as follows:

$$(1) \qquad P_1 = P\left(Y_i = \frac{1}{X_i}\right) = E\left(Y_i = \frac{1}{X_i}\right) = \frac{1}{1 + e^{-(\alpha+\beta iXi)}} = \frac{1}{1 + e^{-Zi}}$$

and it is intended to provide evidence to the impact of the independent variables on the probability that a consumer is willing to pay more for organic olive oil in the restaurant.
X_i is the set of independent variables. Each of the independent variables x_1,x_2,x_3,...is associated with the outcome by a regression coefficient β_1, β_2, β_3,..... This association (log odds) describes the size of the contribution of each explanatory variable to the probability of the dependant one. α is the intercept which means the value of P_i when all the independent variables are zero.

The last part of the equation:

$$(2) \qquad Pi = \frac{1}{1 + e^{-Zi}}$$

represents the logistic distribution which ensures that for every estimated X_i, the value of P_i varies from 0, which could be interpreted as the probability to

have a null willingness to pay more for organic olive oil, to 1, which could be interpreted as the probability to have a positive willingness to pay more for organic olive oil. Therefore, as X_i increases, $\mathbf{P_i = E\left(Y = \frac{1}{X}\right)}$ increases, but it never steps outside the 0-1 interval (Vasisht,2000).
In order to estimate P_i, the equation (2) should be transformed to be linear for the values of X and β. Therefore, the model logit has been specified as:

$$\ln(P_i/1-P_i) = \alpha+\beta X_i+\varepsilon \quad (3)$$

In our study, the dependant variable is the logarithm of the ratio of the probability of the positive willingness to pay for organic olive oil and the null willingness to pay for organic olive oil at the restaurant. The estimated parameter β, describes the effect of the independent variables on the probability that a consumer pays more for organic olive oil. Positive values of β indicates that the growth of the variable X_i will increase the probability for a positive WTP while negative values will increase the probability for a WTP of 0 meaning that customers are unwilling to pay more for organic olive oil. Finally, an error term ε is included to account for differences between the observed outcome values and those predicted by the model.

Prior to starting the estimation of the model, it is tested in order to evaluate its' goodness of fit to the observed data. The statistical tests used in this study are: likelihood ratio test , Wald test and score test.
The likelihood test is used to compare the fit of two models, one of which (the null model) is a special case of the other (the alternative model). This test is based on the ratio of the likelihood L_1 of the fitted model that includes parameters of interest , over the likelihood L_0 of the null model where all slope parameters are zero. Consequently, a Chi-square statistic is computed as follows: Chi-square= -2 x ($\log(L_0)$ - $\log(L_1)$). The degrees of freedom for this Chi-square value are equal to the number of independent variables in the fitted model. If the *p*-level associated with this Chi-square is significant, then we can say that the fitted model yields a significantly better fit to the data than the null model, that is, the regression parameters are statistically significant. In our study, a *p*-value<0.5 was fixed which indicates that the model fits well to the observed data.
The score test is used to evaluate the statistical significance of parameters estimates. The test is based on the behavior of the log-likelihood function at the point where the respective parameter estimate is equal to 0.0 (zero); specifically it uses the slope of the log-likelihood function evaluated at the null hypothesis value of the parameter (parameter = 0.0). While this test is not as accurate as explicit likelihood-ratio test statistics, its computation is usually faster. It is therefore the preferred method for evaluating the statistical significance of parameters estimates in model building methods.
The Wald test is a way of testing the significance of particular explanatory variables in a statistical model. If for a particular explanatory variable, or group of explanatory variables, the Wald test is significant, then we would conclude that the parameters associated with these variables are not 0, so

that the variables should be included in the model. If the Wald test is not significant then these explanatory variables should be omitted from the model.
The three tests are referred to in statistical literature on testing of hypotheses as the Holy Trinity, that is, no one is uniformly superior to the others.

3.4. Restaurant managers survey

In the following paragraphs are described in details the materials and methods used for the restaurant managers survey related to the design of the research tool, data collection and data reporting and analysis.

3.4.1.Design of the research tool

Another questionnaire was elaborated in English language, and was addressed to the restaurant managers seeking to investigate their attitudes towards the use of organic olive oil at the restaurant. The questionnaire was composed of a total of 23 questions and divided into 2 main parts: the first part served to determine the restaurants characteristics, while the second one served to recruit restaurant managers that know about organic products, to determine their level of knowledge, to investigate their motivations and barriers for the use of organic olive oil in the restaurant and finally to know their willingness to pay for it. It should be noted that the second part was addressed only to managers who know about organic products.

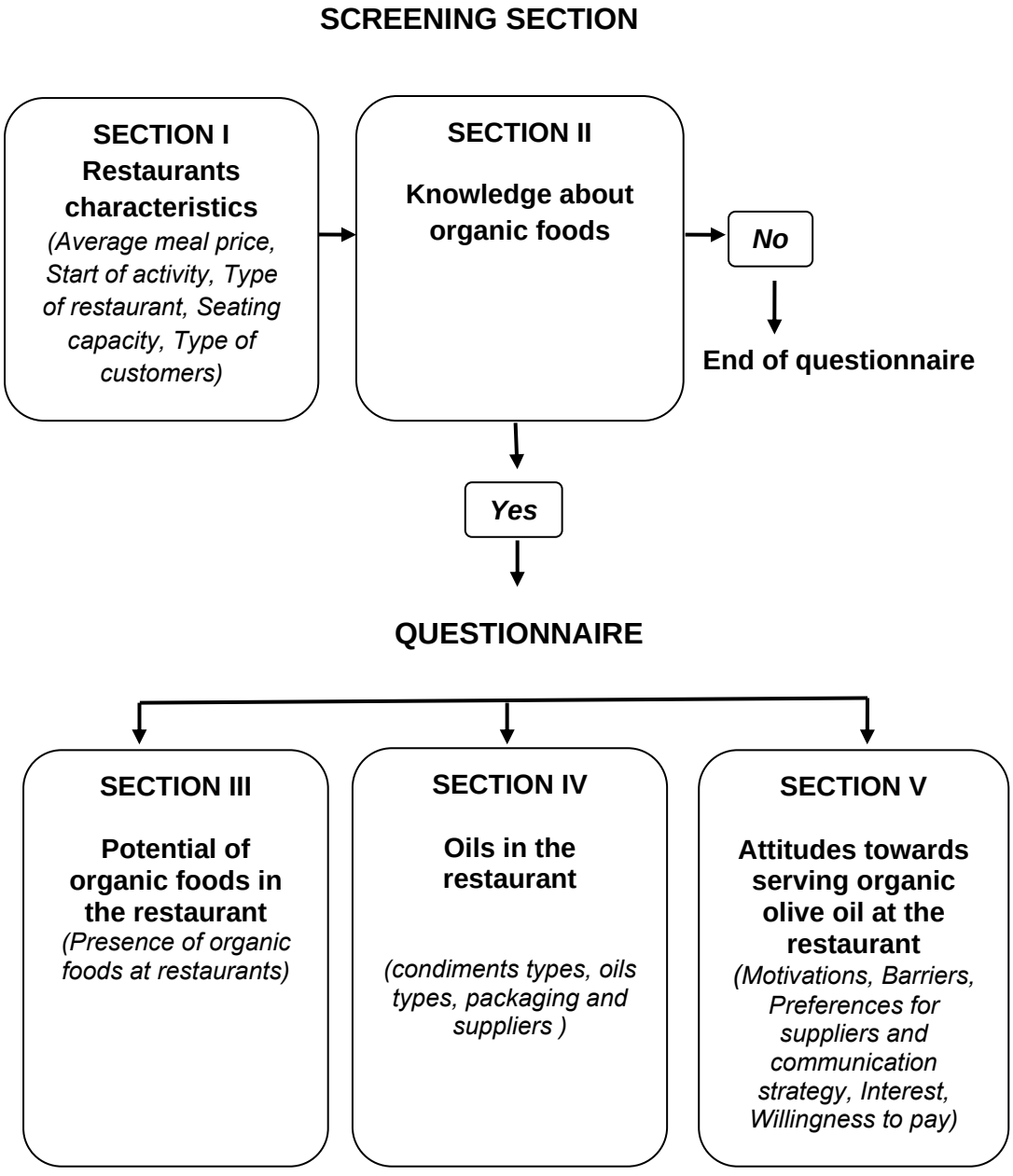

Figure 13. Structure of restaurant managers questionnaire

The screening part was composed by a total of 7 questions belonging to different types:

Section I

This section is composed of 6 questions and represents the restaurant characteristics:

•Name (open question)
•Year of start of activity (open question)
•Kind of restaurant (closed question/single response)

•Types of customers of the restaurant (closed question/multiple response)
•Average meal price per person (closed question/single response)

Section II
This section contains only one question which investigates the managers knowledge about organic products:
• Knowledge about organic products (dichotomous question)

The questionnaire administered to responding managers who know about organic products is composed of 16 different questions included in 3 main sections:

Section III

This section is composed of 2 questions and is devoted to know the potential of organic products in the restaurant:
• Level of knowledge about organic products (open question)
• Presence of organic products in the restaurant (closed question/multiple response)

Section IV
This section is composed of 4 questions which describes the oils used in the restaurant:
•Types of condiments used for meals preparation (closed question/multiple response)
•Types of oils used for meals preparation; Usage, quantity, cost and origin of oils. (closed question/multiple response)
•Type, size and material of packing of the oils used in the restaurant (closed question/multiple response)
•Types of oil suppliers (closed question/multiple response)

Section V
This section is composed of 10 different questions devoted to better understand the managers attitudes towards serving the organic olive oil in the restaurant:
• Motivating factors to buy organic olive oil for the restaurant (scaling question)
• Barriers to buy organic olive oil for the restaurant (scaling question)
• Opinions about customers behavior towards the consumption of organic olive oil at the restaurant (scaling question)
• Preferences for organic olive oil suppliers' type (closed question/multiple response)
• Organic olive oil suppliers' characteristics (scaling question)
• Interest to use organic olive oil as an important element for a successful differentiation strategy (dichotomous question)
• Preferences for the communication way of organic olive oil to the restaurant customers (closed question/multiple response)
• Willingness to pay for organic olive oil (dichotomous question)
• Premium price range (closed question/single response)

• Perceptions about the future potential for organic olive oil in the Lebanese restaurants channel (closed question/single response)

3.4.2.Data collection

In order to reach the goals of the managers survey, 20 managers of the 20 selected restaurants were contacted through phone calls or via e-mail to fix appointments with them. The visits to the restaurants took place during the day or at night upon the managers' request. The data collection was done through face-to- face interviews carried out in 20-30 minutes each. Managers were collaborative and shared their knowledge and perspectives by giving answers to the questions prepared. In effect, the face-to-face interviews have the advantage that difficult questions and control questions can be asked, spontaneous answers can be registered and ambiguous answers can be clarified with explanations. It must however, be considered, that both the interviewer and the respondent can lead to distorted results through verbal or cognitive communication barriers and through certain opinions, expectations and motives of the respondent or interviewer (kullaj, 2007).

Figure 14. Interviews with restaurant managers

3.4.3.Data reporting and analysis

Data collected through the managers survey was transferred into a database in Microsoft Office Excel, 2007. For the elaboration of the database, a code was given for each question and the answers for dichotomous, multiple choice and scaling questions were numbered using the same approach as the one used for the database of customers questionnaire. Scaling questions

were formed by five ordered levels and the Likert items used ranked from -2 to 2 (-2= Strongly disagree and 2= strongly agree). A descriptive analysis was used to describe –for expensive and less-expensive restaurants- the restaurant characteristics, restaurateurs' knowledge about organic products, potential for organic products in the restaurant and oils used in restaurant. Also, it was used to verify if differences exist between the restaurateurs' attitudes towards serving organic olive oil in both types of restaurants.

Chapter 4

Results and discussions

4.1.Characterization of the restaurant customers

In the following paragraphs are included the results of the descriptive analysis of the restaurant customers survey related to the customers socio-demographic characteristics, dining-out habit, knowledge about organic products, motivations and barriers to have organic olive oil at the restaurant and willingness to pay for organic olive oil at the restaurant.

4.1.1. Customers' socio-demographic characteristics

In this paragraph are represented the customers socio-demographic characteristics like gender, age, educational level, income level, origin, place of residence and family composition.

• Gender of restaurant customers

Table 5 shows the gender distribution of respondents.

Table 5: Gender of customers

Gender	n.	%
Male	221	55
Female	179	45
Total	**400**	**100**

The sample of customers participating in the survey is composed of 45% females and 55% males. This result is consistent to Kennedy *et al.* (2003), who stated that men are more likely to use the restaurant service than do women.

• Age of restaurant customers

The distribution of groups of age of the restaurant customers is shown in table 6 below:

Table 6: Customers' groups of age

Age	n.	%
19-34	248	62
35-50 years old	124	31
>50 years old	28	7
Total	**400**	**100**

It is evident that the sample of respondents was formed mainly by young customers. The majority of them have less than 19-30 years old who formed

62% of the total number of respondents, while older customers having 35-50 years old formed 31% of the sample, and the oldest ones having more than 50 years old were few and constituted only 7% of the total respondents. Also, this feature of the sample is consistent to the study of Kennedy *et al.* (2003), which stated that younger customers are more likely to use restaurant service than older ones.

• Educational level of restaurant customers

The educational level of restaurant customers was also investigated and the results are shown in table 7 below:

Table 7: Customers' educational level

Educational level	n.	%
Low	15	4
High school	89	22
University or postgraduate	296	74
Total	**400**	**100**

Sample customers showed to be highly educated. In fact, 74% of the respondents had a university degree or a postgraduate specialization, achieved within a period of 12 years, 22% of them had a high school education, achieved within 10 years, and only 4% had just completed the compulsory education within a total of 8 years.

• Annual income level of restaurant customers

The distribution of customers' annual income level is presented in table 8:

Table 8: Customers' annual income level

Annual income level	**n.**	**%**
<30,000$	144	36
30,001-60,000$	95	24
60,001-90,000$	90	23
>90,000$	71	18
Total	**400**	**100**

Results showed that the sample was formed by customers having a diversified income level, where customers earning <30,000$ yearly were the most abundant, and constituted 36% of the sample, those having a higher income were less abundant. In fact, those earning 30,001-60,000$ yearly had almost the same share in the sample (24%) as those earning 60,001-90,000$ yearly (23%). Finally, customers having an income of >90,000$ were the least abundant and formed 18% of the sample.
These findings confirm what was noted in literature that dining out in Lebanon is not restricted to customers with high income level and that the

development of the Lebanese restaurant sector does not depend on consumers' purchasing power but it depends on their dining-out habit.

• Origin of restaurant customers

Table 9 presents the origin of the restaurant customers who participated in the survey:

Table 9: Origin of customers

Origin	n.	%
Local	379	95
Foreigners	20	5
Total	**400**	**100**

Almost all respondents participating in the survey were Lebanese customers using the Lebanese restaurant service (95%). Foreign customers were also collaborative and shared their opinions and personal experience through filling the restaurant customers questionnaire (5%). The foreign countries indicated by respondents were: France, Algeria, Denmark, New York, Saudi Arabia, Africa, Italy, Japan, Jordan, UAE. This diversity of countries of origin differentiates between the types of restaurant patrons seeking different needs and having different interests.

• Place of residence of restaurant customers

Table 10 shows the place of residence of the restaurant customers:

Table 10: Place of residence of customers

Place of residence	n.	%
In Lebanon	373	93
Outside Lebanon	27	7
Total	**400**	**100**

Almost all Lebanese customers were living inside Lebanon, and formed 93% of the sample, while tourists and emigrants were a minority, and formed 7% of the sample. More precisely, half of the customers who live in Lebanon, are living in the city of Beirut, while the other half are living outside the city in different Lebanese regions, which are Bekaa, Mount Lebanon, North of Lebanon and South of Lebanon.

• Family composition of restaurant customers

The number of customers' family members is shown in table 11:

Table 11: Number of customers' family members

Family members	n.	%
1	9	2
2	23	6
3	65	16
4	124	31
>4	179	45
Total	**400**	**100**

As it is shown, the majority of respondents belong to large families: 45% of customers are from families composed of more than 4 members and 31% are from families composed of 4 members. On the contrary, respondents belonging to smaller families were less numerous. In fact, 16% of customers are from families formed by 3 members, 6% of them are from families formed by 2 members and the remaining 2% are from families formed by only 1 member.

4.1.2.Customers' dining out habit

This part of analysis discusses the results related to the number of meals consumed monthly by customers at the restaurant, as well as customers' usual expenses for eating at the restaurant, customers' reasons to visit the restaurant, the factors affecting customers' decisions about restaurant choice and finally, the factors affecting customers' decisions about food choice at the restaurant.

•Meals consumed monthly at the restaurant

The number of meals consumed monthly reflects the frequency of customers' monthly visits to the restaurant

Table 12: Number of meals

Meals	n.	%
1	40	10
2-4	155	39
> 4	205	51
Total	**400**	**100**

The results indicated a high frequency of monthly restaurant visits, where 51% of respondents declared that they consume more than 4 meals per month which means that they visit restaurants more than 4 times. In addition, 39% of customers declares that they visit restaurants 2-4 times per month. Instead, 10% of them consume only one meal per month. These findings confirm once more that the dining out habit is a part of the Lebanese social lifestyle.

•Usual expenses at the restaurant

The usual expenses at the restaurant were investigated by considering the average meal price that customers pay when they visit the restaurant.

Table 13: Average meal price

Average meal price	n.	%
< 20 $	67	17
21-40$	134	34
41-60$	117	29
61-80$	61	15
> 80$	21	5
Total	**400**	**100**

The findings in table 13 show that most of customers (34%) usually pay 21-40$ for meals at restaurants, also a big part (29%) pay a higher price of 41-60$. Moreover, 17% of customers pay usually <20$ and 15% of them pay 61-80$, while those who pay >80$ as an average meal price were very few (5%). These findings reveal a diversified customers' purchasing power, and so, it indicates that the average meal price is not a key factor affecting the Lebanese customers' decision making process towards restaurant choice. These results confirm what the AFC Consultants International have stated that the restaurant market channel in Lebanon has developed quickly not because of the Lebanese consumer's purchasing power but because Lebanese people like to go out in places where they can meet people and enjoy good food.

•Reasons to visit the restaurant

Furthermore, the reasons why do customers visit the restaurant are presented in table 14:

Table 14: Reasons to visit the restaurant

Reasons	n.	%
Meeting with friends	277	69
Lunch breaks	132	33
Business meeting	124	31
Specific occasions	90	23
Others	24	6

Note: Several answers were possible

Lebanese customers frequent the restaurant because it is a place to socialize and meet people; the biggest part of the respondents (69%) chose "meeting with friends" as the main reason to visit the restaurant. In addition, the findings in the table 14 show that eating at restaurant is a part of the daily life of the Lebanese customers who have indicated that they use the restaurant service more for "lunch breaks" (33%) and "business meetings"(31%) than for

"specific occasions" (23%). Few customers (6%), declared that they have other reasons to visit restaurant, as for example some of them indicated that they visit the restaurant for dating and others declared that they visit it just to eat because they live alone and they don't have time to cook at home.

•Factors affecting consumers' decisions about restaurant choice

The following table shows the consumers' relative level of agreement on the factors which could have an impact on their decisions about restaurant choice.

Table 15: Factors affecting consumers' decisions about restaurant choice

Factors	-2	-1	0	1	2	Score	Rank
Clean environment	8	8	31	110	243	1.43	1
Better quality food per price paid	10	13	48	146	183	1.20	2
Good service	9	5	62	146	178	1.20	3
Innovative and differentiated food	12	30	99	131	128	0.83	4
Suggestions of friends and family	15	39	157	120	69	0.47	5
Local restaurants providing local food	16	79	145	92	68	0.29	6
Price of meals	35	70	130	107	58	0.21	7

Note: -2= Strongly disagree, 2= Strongly agree

All the factors presented in the table showed to have an impact on consumers' decisions about restaurant choice (all the factors had positive scores). In fact, it is evident that customers are mostly concerned about hygiene standards when they decide to choose a specific restaurant and gave the highest score for the factor "clean environment" (1.43). Also, other factors can affect their decisions, as for example the factors "better quality food" and "good service" which had the same score (1.20) and were ranked in the second place, and the factor "innovative and differentiated food" which was ranked in the third place (0.83). Moreover, consumers' decisions showed to be less affected by "suggestions of friends and family" (0.47), and by "local restaurants providing local food" (0.29), and to be the least affected by "price of meals" (0.21).

This result confirms the one obtained by Potter and Williams. (1996), who found that hygiene standards create the initial impression of a restaurant, and are thus highly relevant to consumers when choosing a restaurant and that poor hygiene standards prompted customers to quickly turn away from the restaurant.

•Factors affecting consumers' decisions about food choice at the restaurant

Table 16 represents the consumers' relative level of agreement about the factors which could have an impact on their decisions about food choice at the restaurant.

Table 16. Factors affecting consumers' decisions about food choice at the restaurant.

Factors	-2	-1	0	1	2	Score	Rank
Safe food	10	13	47	112	218	1.29	1
Healthy and fresh food	9	14	55	119	203	1.23	2
New and differentiated food	15	35	82	105	163	0.92	3
Specific food concerns	90	107	106	63	34	0.39	4
Meal prices	27	56	153	124	40	0.24	5

Note: -2= Strongly disagree, 2= Strongly agree

Lebanese restaurant customers declared to be the most interested in food safety by giving the highest score for "safe food" (1.29). They were also highly interested in eating "healthy and fresh food" (1.23), while they were interested enough in consuming "new and differentiated food" (0.92) in the restaurant. On the other hand, they declared that having "specific food concerns" (0.39) could lead less their decisions to choose food from the restaurant menu and that they are the least interested in "meal prices" (0.24). These findings contradict the one of Lillywhite *et al.* (2008) who demonstrated that the price is the primary factor determining consumer choice for restaurant menu items.

4.1.3.Customers' knowledge about organic foods

Customers' knowledge about organic foods is shown in table 17 below:

Table 17. Customers' knowledge about organic foods

Knowledge	n.	%
Yes	313	78
No	86	22
Non respondents	1	0
Total	**400**	**100**

The biggest part of respondents (78%) declared that they know about organic products, while a smaller part (22%) declared that they don't know about these products. One customer did not respond to this question.

Furthermore, respondents were asked if they are interested to taste and learn about organic foods in restaurant (table 18):

Table 18. Interest in organic foods in the restaurant

Interest	n.	%
Yes	291	73
No	65	16
Non respondents	44	11
Total	**400**	**100**

The majority of respondents (73%) was interested in tasting and learning about organic products in the restaurant while only 16% were not interested to do it and 11% did not give an answer to this question.

4.1.4.Customers' purchasing behavior of organic foods

The table 19 below, shows the customers purchasing behavior of organic foods.

Table 19. Purchasing behavior of organic products

Purchasing behavior	n.	%
Respondents who already purchase organic products	168	54
Respondents who don't purchase organic products but are interested to purchase in the future	92	29
Respondents who don't purchase organic products and are not interested to purchase in the future	53	17

The majority of respondents who know about organic products (54%) declared that they have already purchased at least one product type (vegetables, fruits, cereals, oils or others). In addition, a smaller part (29%) of customers who don't purchase organic products, indicated a positive interest to buy at least one product type in the future, while the smallest part (17%) were not interested at all to do it in the future.

Moreover, customers who declared to not be interested to purchase organic products in the future were asked about the reasons behind their attitudes, and the results came as follows:

Table 20. Reasons to not purchase organic products (N.53)

Reasons	n.	%
Don't know where to find organic products	19	36
The price of organic products is too high	33	62
Don't trust organic labeling and certification	28	53
Not interested in organic products	14	26
Other reasons	1	2

Note: Several answers were possible

The findings in table 20 showed that “the price of organic products is too high”, is the main reason why the majority of customers (62%) were not interested to purchase organic foods in the future. The reason “don’t trust organic labeling and certification” was also indicated by a big part of customers (53%), while the reason “don’t know where to find organic products” was less indicated (36%). The reason “not interested in organic products” was the least indicated (26%), and finally 2% of customers declared that they have other personal reasons to not purchase organic foods in the future.

•Types of oils consumed at home

The following table 21 includes the types of oils consumed by respondents at home:

Table 21. Types of oils consumed at home

Oil types	n.	%
Organic	60	19
Extra-virgin	109	35
Olive oil	189	60
Seeds oil	91	29

Note: Several answers were possible

The results show the importance of olive oil in the Lebanese cuisine which is consumed the most by customers at home (60%). In addition, customers declared that they consume less extra-virgin olive oil (35%) and seeds oil (29%), and that they consume the least organic olive oil (19%).

4.1.5.Customers’ motivations and barriers to consume organic olive oil at the restaurant

In this paragraph, are exposed the customers’ reasons to consume organic olive oil at the restaurant as well as the factors which could affect their decisions to do it.

• Reasons to consume organic olive oil at the restaurant

The following table shows which aspects of organic olive oil do the consumers consider when they decide to consume it in the restaurant.

Table 22. Reasons to consume organic olive oil at the restaurant

Reasons	**-2**	**-1**	**0**	**1**	**2**	**Score**	**Rank**
Healthier	8	9	33	64	199	1.4	1
Better quality	5	15	59	87	147	1.14	2
Contributes to environmental protection	10	13	68	73	148	1.07	3

Note: Several answers were possible

Restaurant customers were aware about the benefits of organic olive oil. In fact, they gave positive score for all the reasons presented in table 22. They were the most interested in health issues, giving the highest score for ”organic olive oil is healthier” (1.40), but also they were interested in ”organic olive oil is of better quality” (1.14) and “organic olive oil contributes to environmental protection” (1.07). The obtained results confirm the ones of the comparative study carried out in Greece by Sandalidou *et al.* (2000), which noted that in general customers seemed to be more satisfied from organic olive oil than from conventional one in terms of health, consecutively, health was considered as a competitive advantage of organic olive oil.

•Motivations to consume organic olive oil at the restaurant

Customers were asked to give their level of agreement related to different types of communication strategies which could motivate them to consume organic olive oil at the restaurant. The results are presented in the table below:

Table 23. Motivations to consume organic olive oil at the restaurant

Motivations	-2	-1	0	1	2	Score	Rank
The organic olive oil is mentioned in the restaurant menu	10	23	90	95	90	0.74	1
The restaurant provides monodose samples of organic olive oil	10	33	76	95	94	0.73	2
The restaurant provides labeled bottles of organic olive oil where the organic label is evident	10	26	140	87	44	0.41	3
The restaurant distributes leaflets and brochures about the organic olive oil	22	38	114	82	51	0.33	4

Note: -2= Strongly disagree, 2= Strongly agree

As it is shown in table 23, customers were interested enough in all the communication strategies proposed which had positive score values lower than one. They were more motivated by “organic olive oil is mentioned in the restaurant menu” (0.74) and “the restaurant provides monodose samples of organic olive oil” (0.73), than by other strategies: “the restaurant provides small labeled bottles of organic olive oil where the label is evident” (0.41) and “ the restaurant distributes leaflets and brochures about the organic olive oil” (0.33).

•Barriers to consume organic olive oil at the restaurant

Different factors were considered by our study as having a negative influence on the consumers’ decisions to consume organic olive oil in the restaurant.

Table 24. Barriers to consume organic olive oil at the restaurant

Barriers	-2	-1	0	1	2	Score	Rank
The lack of interest in organic olive oil in the restaurant	14	19	95	123	60	0.63	1
The lack of trust in the management system of the restaurant	9	52	97	106	47	0.42	2
The lack of trust in the organic certification system	21	58	107	82	42	0.21	3
The high price of meals prepared with organic olive oil	26	61	109	75	40	0.13	4
The need for a food quality regulation system for Lebanese restaurants	35	96	88	67	25	-0.16	5

Note: Several answers were possible

It was evident that the listed factors don't put important limitations on the consumption of organic olive oil in the restaurant because the score values given are all positive and lower than one and one factor had a negative score. The customers declared that "the lack of interest in organic olive oil in the restaurant" (0.63) is a more important barrier than "the lack of trust in the management system of the restaurant" (0.42), "the lack of trust in the organic certification system" (0.21) and "the high price of the meals prepared with organic olive oil" (0.13). In addition, "the need for a food quality regulation system for Lebanese restaurants" is not considered as a barrier by the restaurant customers because it had a negative score (-0.16).

4.1.6.Customers' willingness to pay for organic olive oil at the restaurant

After investigating their purchasing behavior regarding organic products, their motivations and barriers to consume organic olive oil in the restaurant, customers were asked if they are interested to order meals prepared with organic olive oil and which additional price are they willing to pay.

Table 25. Customers' interest

Interest	n.	%
Yes	278	89
No	35	11
Total	**313**	**100**

Almost all respondents (89%) were interested to order meals prepared with organic olive oil, while a minor part (11%) were not interested to do it.

Table 26. Customers' willingness to pay

Additional price	n.	%
0$	53	17
1-5$	184	59
6-10$	41	13
>10$	0	0
Non respondents	35	11
Total	**313**	**100**

Among the respondents who were interested to order meals prepared with organic olive oil, 17% didn't want to pay more or wanted to pay the same price as for meals prepared with non-organic olive oil. The majority of customers (59%) declared that they are willing to pay from 1-5$ more, while customers who declared to be ready to pay 6-10$ more were less numerous (13%). No one was ready to pay more than 10$.

4.1.7. Factors influencing the willingness to pay for organic olive oil at the restaurant

This part describes the results of the logistic regression analysis applied in order to evaluate the customers willingness to pay for meals prepared with organic olive oil and to identify which factors can affect positively their willingness to pay.

The hypothesized model

In order to apply the logistic regression analysis in our study, a model was built in a reasonable way to describe the relationship between the outcome variable and the set of independent variables. The model was built using SAS program which provided a comprehensive statistical tool for the regression analysis.
The sample of respondents considered by the logit model was formed by customers who know about organic products and who answered to the total number of questions in the administered questionnaire, while customers who didn't reply to at least one question were eliminated from the model. And so, the selected sample relevant to this type of analysis is formed by a total of 194 respondents. The socio-demographic features of the sample are shown in the table 27 below:

Table 27. Socio-demographic features of the selected sample

Variable	Description	Count	% of sample	Mean
Gender	Male	93	48	
	Female	101	52	-
Age	19-34	120	62	
	35-50	61	31	34 years
	Older than 50	13	7	
Education	Low (8years)	3	2	
	High school (12years)	37	19	16 years
	University or postgraduate (>12years)	154	79	
Income	<30,000$	61	31	
	30,001 – 60,000$	44	23	54,381$
	60,001 – 90,000$	50	26	
	>90,000$	39	20	
Household size	1	5	3	
	2	14	7	4
	3	29	15	components
	4	64	33	
	>4	82	42	
Place of residence	Lebanon	180	93	-
	Outside Lebanon	14	7	

According to the findings, female respondents were slightly more abundant in the sample than male ones. Since the average age among the sample was 34 years old, the respondents can be considered young. In addition, the respondents were highly educated, whom have accomplished a university degree or a postgraduate specialisation within an average period of 16 years, and they earn a high income yearly, (average of 54.381$). Another evident aspect is that the respondents belong to families of large size (average of 4 members).

Most of respondents indicated a positive willingness to pay for meals prepared with organic olive oil at restaurant. The average WTP obtained was 3.16$. The biggest part of the sample (84%) indicated a willingness to pay between 0 and 5$, while the minor part (16%) indicated a willingness to pay higher than 5$.

The questionnaire addressed to the restaurant customers included 21 variables belonging to different types (nominal, Likert scale, multiple response and dichotomous). The size of the selected sample of customers is considered relatively small, while the number of the variables is too large with respect to it. Consequently, the number of independent variables considered by the hypothesized model was reduced. And so, a total of 16 variables were selected because of their relevance in the explanation of the willingness to pay and were implemented in the model. These variables are related to the customers dining-out habit (monthly frequency at restaurant, frequent restaurant mainly for lunch breaks, frequent restaurant mainly in specific occasions and frequent restaurants mainly for business reasons), home consumption habit (like to taste and learn about organic product at home, doesn't consume organic but he could in the future, consume organic olive oil at home, consume extra-virgin olive oil at home and consume olive oil at

home) and socio-demographic characteristics (gender, age in years, years of school education, annual income, resident in Lebanon and component of family).
The table 28 below shows the labeling and codification used for the implementation of the selected independent variables in the hypothesized logit model.

Table 28. Variables implemented in the model

Variable	Label	Values
1.Frequency	Monthly frequency at restaurant	Number
2.reason_lunch	Frequent restaurant mainly for lunch breaks	0 = no, 1 =yes
3.reason_occasions	Frequent restaurant mainly in specific occasions	0 = no, 1 =yes
4.reason_business	Frequent restaurant mainly for business reasons	0 = no, 1 =yes
5.like_organic	Like to taste and learn organic products at restaurant	0 = no, 1 =yes
6.purchase_organic	Consume organic product at home	0 = no, 1 =yes
7.doesnt_purchase_org	Doesn't consume organic but he could in the future	0 = no, 1 =yes
8.consume_organic_oil	Consume organic olive oil at home	0 = no, 1 =yes
9.consume_extra_virgin	Consume extra virgin olive oil at home	0 = no, 1 =yes
10.consume_olive_oil	Consume olive oil at home	0 = no, 1 =yes
11.Sex	Gender	0 = female, 1 =male
12.Age	Age in Years	Number
13.Education	Years of school education	Number
14.Income	Annual income	Dollars
15.Lebanese	Resident in Lebanon	0 = no, 1 =yes
16.Family	Component of family	Number

After selecting the independent variables, the formal specification of the estimated model becomes:

$\ln(P_i/1-P_i) = \beta_1 x\ frequency + \beta_2 x\ reason\_lunch + \beta_3 x\ reason\_occasions + \beta_4 x\ reason\_business + \beta_5 x\ like\_organic + \beta_6 x\ purchase\_organic + \beta_7 x\ doesn't\_purchase\_organic + \beta_8 x\ consume\_organic\_oil + \beta_9 x\ consume\_extra\_virgin + \beta_{10} x\ consume\_olive\_oil + \beta_{11} x\ sex + \beta_{12} x\ age + \beta_{13}\ education + \beta_{14}\ income + \beta_{15}\ lebanese + \beta_{16} x\ family + e$

However, after the first model estimation, we noticed that the dependent variable that we used was not convenient and that there is a need to modify it for a more adequate estimation of the model. In our first trial, the dependant variable (WTP) included in the model had the value 1 when the consumer is willing to pay at least one dollar more for meals prepared with organic olive oil and the value 0 in case the consumer is not willing to pay more or wants to pay the same price for meals prepared with organic olive oil. After many trials this variable was changed until it assumed the value 1 when the consumer is willing to pay more than five dollars for meals prepared with organic olive, which is considered as “high WTP”, and the value 0 when the consumer is willing to pay less than five dollars (zero to five dollars), which is considered as “null-low WTP”. Following these modifications, a new model was created and tested for adequacy. The model goodness-of-fit test is represented in the table 29 below:

Table 29. Model-goodness-of-fit

Test	***Chi-square***	***DF***	***Pr > Chi-square***
Likelihood ratio	126.9857	16	<.0001
Score	104.3194	16	<.0001
Wald	62.7585	16	<.0001

DF: Degrees of freedom

The results showed that all three tests have a $P_{value} < 0.001$ and so, the new estimated model fits well to the data of our study.

The estimated logit model including the new dependent variable is represented in the following table 30.

Table 30. Estimated model

Parameter	*DF*	*Estimate*	*Standard error*	*Chi-square Wald*	*Pr > Chi-square*
1.frequency	1	0.0580	0.0333	3.0332	0.0816**
2.reason_lunch	1	-0.5886	0.4937	1.4213	0.2332
3.reason_occasions	1	0.6831	0.5812	1.3814	0.2399
4.reason_business	1	0.5682	0.4973	1.3054	0.2532
5.like_organic	1	0.3885	1.1628	0.1116	0.7383
6.purchase_organic	1	-0.1962	0.6826	0.0826	0.7738
7.doesnt_purchase_org	1	0.8595	0.8128	1.1183	0.2903
8.consume_organic_oil	1	0.9436	0.7130	1.7517	0.1857*
9.consume_extra_virgin	1	1.2417	0.6930	3.2100	0.0732**
10.consume_olive_oil	1	1.2450	0.6587	3.5723	0.0588**
11.sex	1	-0.5304	0.4584	1.3384	0.2473
12.age	1	-0.0264	0.0254	1.0781	0.2991
13.education	1	0.1572	0.0768	4.1880	0.0407**
14.income	1	-0.0090	0.0082	1.2123	0.2709
15.lebanese	1	0.1835	0.8926	0.0423	0.8371
16.family	1	-0.4130	0.2308	3.2024	0.0735**

* *denotes a statistical significance at the 20 percent significance level*
** *denotes a statistical significance at the 10 percent significance level*

For each independent variable, the SAS software estimated the β coefficient, variability, Wald Chi-Square, and the associated p-value. Then, we moved to evaluate the statistical significance of the relation between each independent variable and the dependant one. In the estimated model, the parameters were considered statistically significant if the related P_{value}<0.10. According to the literature, the statistical significance of the parameters is generally given by a P_{value}<0.05. Some studies used higher significance levels; as for example, a P_{value} <0.10 was used by Menapace *et al,* (2010) and by Loureiro *et al,* (2006).
In our study, because of the survey limitations (it was conducted in a short time of one month, by one personal, and lacked the adequate necessary tools) we fixed a P_{value}<0.10 to be able to implement a higher number of variables in the model we built, but also we considered that parameters with P_{-value} < 0.20 as statistically significant.
The findings in the table 30, indicate that five of the independent variables included in the model were statistically significant with a P-value<0.10

Consequently, the final equation of the model becomes:

$\ln(P_i/1-P_i)$ = *0.0580 x frequency + 1.2417 x consume_extra_virgin + 1.2450 x consume_olive_oil + 0.1572 x education - 0.4130 x family +e*

Where "P_i" represents the probability that WTP is higher than five dollars, while "1 – P_i" is the probability that WTP is between zero and five dollars and the six statistically significant variables are: monthly frequency at restaurant, consume organic olive oil at home, consume extra-virgin olive oil at home, consume olive oil at home, years of school education and component of family.
Four factors affect positively the probability to obtain a "high WTP" for organic olive oil (having a P_{value}<0.10). These factors are: frequency of restaurant visits, consumption of extra-virgin olive oil at home and the educational level of respondents. In addition, as it was mentioned previously we considered the factor with P_{value}<0.20 as statistically significant. Consequently "consumption of organic olive oil at home" also is a factor that affect positively the probability to obtain a "high WTP"
For instance, the more frequently customers visit restaurants, the more they are enthusiastic about trying new types of foods and ingredients. Also, the customers' personal experience with organic olive oil affects positively their willingness to pay more for the product in the restaurant. Customers' who have already purchased organic olive oil from different market channels, for home consumption, were ready to consume it and to pay more than five dollars for it in the restaurant channel. This "high WTP" was also declared by customers who already consume olive oil or extra-virgin olive oil at home. Moreover, the customers' high educational level showed to be positively related with their willingness to pay more than five dollars for organic olive oil.

On the contrary, the results indicated that the family composition of the customers was negatively related with the probability that they declare a "high WTP". Thus, the more the number of customers' family members is high, the less they are willing to pay more than five dollars to consume organic olive oil in the restaurant. Furthermore, the findings showed that the customers' income level didn't have any significant effect on their willingness. This result contradicts the one obtained by the study of Gavruchenko et al. (2003) and most of the literature on the consumption of organic products, which showed that consumers with higher income are willing to pay a higher price for organic olive oil. Also, it contradicts the results obtained by other studies (Patterson et al, 2002; Lillywhite et al*,* 2008; Poulston and Yiu, 2011) which found that consumers' choices over restaurant menu items are mainly guided by the economic factors such as income level and price of the product. The result obtained for the income level can be balanced by the one obtained for the family composition which indicated that customers' family size is relatively large. In other terms, when the number of family members is high, the level of income per capita becomes low, consequently, customers declare a lower willingness to pay for the product.

4.2.Data analysis of restaurant managers survey

The following paragraphs discuss the results of the descriptive analysis of the restaurant managers survey with respect to restaurant characteristics, restaurateurs' knowledge about the organic products, potential of organic products at the restaurant and restaurateurs' attitudes towards serving organic olive oil at the restaurant.

4.2.1.Restaurant characteristics

This part represents the characteristics of the investigated restaurants with respect to average meal price, start of activity, type of restaurant, seating capacity and type of customers.

• Average meal price

The average meal price was the main criteria used to select the restaurants and to differentiate them into two types: expensive and less-expensive restaurants. The first type of restaurants provides meals costing more than 40$, while the second type provides meals costing less than 40$. The sample was formed by a total of 20 restaurants: 10 expensive and 10 less-expensive restaurants. In the following part, the data analysis was elaborated by comparing the two types of restaurants.

•Start of activity

The restaurant managers were asked in which year did the restaurant start its activity. From the findings, it was possible to form 2 groups of restaurants: the first including restaurants working since more than 5 years, and the second including more recent restaurants, which are working since less than 5 years.

Table 31. Start of activity (%)

Years	Expensive **(n.10)**	Less-expensive **(n.10)**
>5	40	60
<5	50	50

Older restaurants are slightly more prevalent among less-expensive restaurants. As it is shown, 60% of the less-expensive restaurants are working since more than 5 years compared to 40% for expensive restaurants.

•Type of restaurant

The type of restaurants refers to the type of its management system. The main two types of restaurants investigated were independent and chain restaurants.

Table 32. Type of restaurant (%)

Restaurant type	Expensive **(n.10)**	Less-expensive **(n.10)**
Independent	40	60
Chain	60	40

Among the expensive restaurants, those of chain type are slightly more prevalent (60%) than independent ones (40%). However, among the less-expensive restaurants, independent restaurants were slightly more prevalent (60%) than those of chain type (40%).

•Restaurant seating capacity

The seating capacity reflects the restaurant capacity or size. In fact, restaurants were differentiated into: small-scale restaurants which are able to receive less than 200 hosts, and large-scale restaurants which are able to receive more than 200 hosts.

Table 33. Restaurant seating capacity (%)

Seating capacity	Expensive **(n.10)**	Less-expensive **(n.10)**
Small-scale	40	60
Large-scale	60	40

Among expensive restaurants, large-scale restaurants are slightly more prevalent (60%) than small-scale ones (40%), while among less-expensive restaurants, small-scale restaurants (60%) were more prevalent than large-scale ones (40%).

•Type of customers

Table 34 represents the different types of customers who frequent both types of restaurants.

Table 34. Type of customers (%)

Customer type	Expensive **(n.10)**	Less-expensive **(n.10)**
Families	40	50
Business persons	0	10
Adult persons	10	10
Mixed groups	40	30

Note: several answers were possible

Both types of restaurants are the most visited by families (40% in expensive restaurants and 50% in less-expensive restaurants) and by mixed groups (40% in expensive restaurants and 30% in less-expensive restaurants). They are less visited by adult persons (10% in expensive restaurants and 10% in

less-expensive restaurants), and the least visited by business persons (0% in expensive and 10% in less-expensive restaurants).

4.2.2. Restaurateurs' knowledge about organic foods

Similarly to the restaurant consumers survey, the restaurateurs' knowledge about organic products was also investigated.

Table 35. Restaurateurs' knowledge about organic foods

	Expensive **(n.10)**		Less-expensive **(n.10)**	
Knowledge	**no.**	**%**	**no.**	**%**
Yes	8	80	10	100
No	2	20	0	0

The managers of less-expensive restaurants were more conscious about the organic concept (100%) than those of the expensive ones (80%).

4.2.3.Potential for organic foods at the restaurant

The presence of organic food products in the restaurants is shown in the table 36:

Table 36. Presence of organic foods in the restaurants

	Expensive **(n.8)**		Less-expensive **(n.10)**	
Attitudes	**no.**	**%**	**no.**	**%**
Restaurants which already serve organic products	1	12	1	10
Restaurants which didn't serve organic products but are interested to serve in the future	7	88	6	60
Restaurants which are not interested at all to serve organic products in the future	0	0	3	30

Few restaurants have already served organic products (12%). With respect to the restaurants which did not serve organic products, the managers of expensive ones were more interested to do it in the future (88%) than those of less-expensive ones (60%). In fact, 30% of the managers of less-expensive restaurants declared that they are not interested at all to serve organic products in the future.

4.2.4.Oils in restaurants

The following part is devoted to discuss the types of condiments used for meals preparation in the Lebanese restaurant cuisine, the types of oils used ,

the origin of oils used and the type of suppliers providing oils to the restaurant.

•Types of condiments used for meals preparation

The types of condiments used in the cuisine of the investigated Lebanese restaurants are presented in table 37:

Table 37. Types of condiments used for meals preparation

	Expensive **(n.8)**		Less-expensive **(n.10)**	
Condiments	**no.**	**%**	**no.**	**%**
Vegetable oils	8	100	10	100
Butter	7	88	9	90
Margarine	3	38	6	60

Note: several answers were possible

As it is shown, both types of restaurants use mainly vegetable oils (100% for the two types of restaurants) and butter (88% in expensive restaurants and 90% in less-expensive restaurants). Margarine is less used, but it is more used in less-expensive restaurants (60%) than in expensive ones (38%).

•Types of vegetable oils used for meal preparation

As it was noted previously, vegetables oils are highly used as condiments for meals prepared in the restaurants. The types of vegetable oils used are presented in the following table:

Table 38. Types of vegetable oils used in the restaurant

	Expensive **(n.8)**		Less-expensive **(n.10)**	
Oil type	**no.**	**%**	**no.**	**%**
Organic olive oil	0	0	1	10
Extra-virgin olive oil	4	50	3	30
Olive oil	5	63	7	70
Seed oils	8	100	9	90

Note: several answers were possible

In both types of restaurants, the managers indicated that seed oils (like sunflower and corn oil) are the most used: (100% in expensive restaurants and 90% in less-expensive restaurants). Seed oils are mainly used for frying and for cooking and less for salad dressing and are mainly imported oils. Olive oil is also highly present in Lebanese restaurants for the preparation of traditional meals (63% in expensive restaurants and 70% in less-expensive restaurants). Extra-virgin olive oil is less-used in both types of restaurants, and is more used in expensive restaurants (50%) than in less-expensive restaurants (30%). Olive oil and extra-virgin olive oil are produced in Lebanon and are mainly used for cooking, salad dressing and for the decoration of the

meals. Finally, only one less-expensive restaurant, which is organically-certified, is providing Lebanese organic olive oil to customers (10%).

•Types of oil suppliers

The types of suppliers providing oils to the restaurants are included in the following table:

Table 39. Types of oil suppliers (%)

Supplier type	Expensive **(n.8)**	Less-expensive **(n.10)**
Producers and Middlemen	50	50
Middleman	50	40
Producers and organic shops	0	10

Oils are mainly provided to both types of restaurants by producers and middlemen (50% for expensive restaurants and 50% for less-expensive restaurants), or just by middleman (50% for expensive restaurants and 40% for less-expensive restaurants). Only one less-expensive restaurant buy the oils directly from producers and from organic shops (10%).

4.2.5.Restaurateurs' behavior towards serving organic olive oil in the restaurant

The aim of this part is to show the restaurateurs' motivations and barriers to use organic olive oil, their perceptions about the consumers' attitudes towards the consumption of organic olive oil in the restaurant, their preferences for the organic olive oil suppliers' characteristics, their interest in serving the product and their willingness to pay for it.

•Restaurateurs' motivations to buy organic olive oil for the restaurant

The restaurant managers were asked to give their level of agreement related to the factors presented in the table 40, which can express their motivations to buy organic olive oil in order to be used in the restaurant cuisine.

Table 40. Restaurateurs' motivations to buy organic olive oil

Motivations for expensive restaurants (n.8)	**-2**	**-1**	**0**	**1**	**2**	**Score**	**Rank**
Fair price of organic olive oil	0	0	0	2	6	1.8	1
Availability of organic olive oil	0	0	0	4	4	1.5	2
Access to organic olive oil through direct marketing	0	0	1	3	4	1.4	3
Added-value for the restaurant	0	0	1	3	4	1.4	4
Actual growing demand for the consumption of organic products	0	0	3	3	2	0.9	5
Being part of an organic network	0	0	3	3	2	0.9	6
An opportunity to educate consumers about organic products	0	1	2	4	1	0.6	7
Personal preferences regarding the organic production practices and standards	0	1	2	5	0	0.5	8
Trust in organic certification	1	2	0	2	3	0.5	9
Advice from suppliers of organic products	0	0	6	2	0	0.3	10
Trust in organic olive oil Producers	1	3	0	1	3	0.3	11
Recognition of the variety of olives used in organic olive oil	0	2	4	2	0	0.0	12
Motivations for less-expensive restaurants (n.10)	**-2**	**-1**	**0**	**1**	**2**	**Score**	**Rank**
Fair price of organic olive oil	0	0	0	4	6	1.6	1
Actual growing demand for the consumption of organic products	0	0	2	2	6	1.4	2
Access to organic olive oil through direct marketing	0	0	2	4	4	1.2	3
Availability of organic olive oil	0	1	1	3	5	1.2	4
Personal preferences regarding the organic production practices	0	0	4	1	5	1.1	5
Trust in organic olive oil Producers	0	0	3	4	3	1.0	6
Trust in organic certification	0	0	4	3	3	0.9	7
Being part of an organic network	0	0	4	5	1	0.7	8
Advice from suppliers of organic products	0	1	4	2	3	0.7	9
An opportunity to educate consumers about organic products	0	2	3	3	2	0.5	10
Added-value for the restaurant	0	4	3	1	2	0.1	11
Recognition of the variety of olives used in organic olive oil	0	2	5	3	0	0.1	12

Note: -2= Strongly disagree, 2= Strongly agree

The two types of managers considered that all the listed factors can motivate them to buy organic olive oil for the restaurant (all the factors were given positive scores). Also, both of them ranked "fair price of organic olive oil" in the first place (1.8: expensive restaurants and 1.6: less expensive restaurants) and consider it as the factor that could motivate them the most to introduce this product in their restaurants.

The managers of expensive restaurants were more motivated by the factors related to the market aspects of organic olive oil, and were conscious that

this product could be an important element which gives their restaurants a competitive advantage. In fact, they gave high scores for “availability of organic olive oil” (1.5), “access to olive oil through direct marketing” (1.4), and “added-value for the restaurant” (1.4). On the other hand, the managers of less-expensive restaurants gave lower scores for “access to the organic olive oil through direct marketing” (1.2) and “availability of organic olive oil” (1.2), and declared to be more motivated by the “actual growing demand” for the organic olive oil” by giving to this factor the second highest score (1.4).
Therefore, the managers of expensive restaurants seem to be more market-oriented than the managers of less-expensive restaurants, who showed a more consumer-oriented approach while deciding to introduce a new product to the restaurant.

•Restaurateurs’ barriers to buy organic olive oil for the restaurant

Moreover, the managers were asked to rank their level of agreement related to the following factors which can put limitations for them to use the organic olive oil in the restaurant.

Table 41. Restaurateurs’ barriers to buy organic olive oil

Barriers for expensive restaurants (n.8)	**-2**	**-1**	**0**	**1**	**2**	**Score**	**Rank**
Difficult access to the organic product	0	0	0	3	5	1.6	1
High price of the organic olive oil	0	0	1	1	6	1.6	2
Limited availability of organic products	0	0	0	4	4	1.5	3
Unskilled chefs and waiter stuffs	0	0	3	1	4	1.1	4
Absence of enough demand for organic products	0	1	2	1	4	1.0	5
Absence of consumers knowledge about organic products	0	2	1	2	3	0.8	6
Personal disinterest towards organic products	3	4	0	0	1	-1.0	7
Barriers for less-expensive restaurants (n.10)							
High price of the organic olive oil	0	0	1	1	6	1.3	1
Unskilled chefs and waiter stuffs	0	0	3	1	4	0.9	2
Absence of enough demand for organic products	0	1	2	1	4	0.8	3
Absence of consumers knowledge about organic products	0	2	1	2	3	0.6	4
Difficult access to the organic product	0	1	3	6	0	0.5	5
Limited availability of organic products	0	2	2	5	1	0.5	6
Personal disinterest towards organic products	1	5	2	2	0	-0.5	7

Note: -2= Strongly disagree, 2= Strongly agree

As it is shown in the table above, all the listed factors were given positive scores and so are considered as barriers except one factor “personal

disinterest towards organic products" which had a negative score (-0.5). Therefore, the managers of both types of restaurant are interested in organic products. However, they had different considerations with respect to the other factors: Several factors are considered as important barriers by the managers of expensive restaurants. These limitations are mainly related to market aspects like: "difficult access to the organic product" (1.6), "high price of organic olive oil" (1.6) and "limited availability of organic products" (1.5). In addition, they considered that the communication of organic olive oil to consumers as well as the consumers demand for the product are important, but are of lower relevance than the market factors. In effect, their ranking for "unskilled chefs and waiter stuffs" came in the fourth place (1.1) and for "absence of enough demand for organic products" came in the fifth place (1.0). On the other hand, in less-expensive restaurants, the managers had different considerations: they ranked in the first place the "high price of the organic olive oil" (1.3) considering this factor as the most important barrier to not be interested to buy the product for their restaurant and gave lower scores to the other factors which they considered of lower importance.

• Restaurateurs' perceptions about customers' attitudes towards the consumption of organic olive oil in the restaurant

To better understand the potential for organic olive oil, it was important to know how do the restaurateurs perceive the consumers' attitudes towards the product.

Table 42. Perceptions about customers' attitudes.

Customers' attitudes in expensive restaurants (n.8)	**-2**	**-1**	**0**	**1**	**2**	**Score**	**Rank**
Customers consider that it is enough that meals are good and fresh	0	1	0	2	5	1.4	1
Customers would appreciate the use of organic olive oil in the restaurant	0	0	4	0	4	1.0	2
Customers would prefer the bottle of organic olive oil on tables	0	0	4	0	4	1.0	3
Customers are concerned with nutrition when dining-out	2	4	0	1	1	0.6	4
Customers know and are interested in environmental issues	1	1	2	2	2	0.4	5
Customers are conscious about the benefits of organic food	1	3	2	2	0	0.4	6
Customers know the organic olive oil	0	4	1	1	2	0.1	7
Customers' attitudes in less-expensive restaurants (n.10)							
Customers consider that it is enough that meals are good and fresh	0	0	1	2	7	1.6	1
Customers would appreciate the usage of organic olive oil in the restaurant	0	1	2	3	4	1.0	2
Customers would prefer the bottle of organic olive oil on tables	1	1	2	3	3	0.6	3
Customers know and are interested in environmental issues	2	2	5	1	0	0.5	4
Customers are concerned with nutrition when dining-out	1	2	0	6	1	0.4	4
Customers are conscious about the benefits of organic food	1	3	4	0	2	0.1	6
Customers know the organic olive oil	1	4	2	1	2	0.1	7

Note: -2= Strongly disagree, 2= Strongly agree

As it is shown in the table above, the managers of both types of restaurants perceived that the customers are the most concerned about the freshness and healthiness of food and gave the highest score for "it is enough that meals are good and fresh" (1.4: expensive restaurants and 1.6: less-expensive restaurants). In addition, both of them perceived that customers will be interested to consume organic olive oil in the restaurant and gave the same score (1.0) for "customers would appreciate the usage of organic olive oil", which they ranked in the second place.

Moreover, the managers of expensive restaurants gave a higher score for "customers would prefer the bottle of organic olive oil on tables" than the managers of less-expensive restaurants (1.0: expensive restaurants and 0.6: less-expensive restaurants).

From the restaurateurs' perspectives, customers of expensive restaurants seemed to be more concerned with nutrition then those of less-expensive restaurants: a higher score was given by the managers of expensive restaurants for "customers are concerned with nutrition when dining-out" (0.6: expensive restaurants and 0.4: less-expensive restaurants). On another hand, customers of less-expensive restaurants seemed to be more interested in environmental issues: a higher score was given by the

managers of less-expensive restaurants for "customers know and are interested in environmental issues" (0.4: expensive restaurants and 0.5: less-expensive restaurants).
Managers of both types of restaurants gave lower scores for " customers are conscious about the benefits of organic food" (0.4: less-expensive and 0.1: expensive restaurants). Despite that the managers perceived that the customers would appreciate the use of organic olive oil in the restaurant, however, both of them perceived that customers do not have a clear conscious about the product and gave the lowest score for "customers know about organic olive oil" (0.1: less-expensive restaurants and 0.1: expensive restaurants), which could lead us to assume that Lebanese customers can have other reasons to be interested to consume organic olive oil in the restaurant.

• Restaurateurs' preferences for the type of organic olive oil suppliers

The results indicated that oils are mainly provided to restaurants by producers or middleman. A further step in our study was to know which type of suppliers would the managers prefer to deal with, in case they were interested to buy organic olive oil in the future.

Table 43. Preferences for the type of organic olive oil supplier

	Expensive (n.8)		Less-expensive (n.10)	
Supplier type	**no.**	**%**	**no.**	**%**
Producers	5	63	4	40
Producer markets	1	13	1	10
Middelman	3	38	5	50
Supermarkets	0	0	0	0
Organic shops	0	0	1	10

Note: Several answers were possible

Managers of expensive restaurants prefer the most to buy organic olive oil from producers (63%), they prefer less to buy it from middleman (38%) and producers markets (13%), and don't prefer at all to do it from supermarkets (0%) or from organic shops (0%). On the other hand, the managers of less-expensive prefer the most to deal with middleman (50%) more than with producers (40%). They prefer less to buy organic olive oil from producers markets (10%) and from organic shops (10%), and don't prefer at all to do it from supermarkets (0%).

•Restaurateurs' preferences for organic olive oil suppliers' characteristics

The following table 44 represents the restaurateurs' preferences for the organic olive oil suppliers' characteristics.

Table 44. Preferences for organic olive oil suppliers' characteristics

Suppliers characteristics for expensive restaurants (n.8)	**-2**	**-1**	**0**	**1**	**2**	**Score**	**Rank**
Ensuring complete supply throughout the year	0	0	0	1	7	1.9	1
Ensuring small supplies	0	0	0	1	7	1.9	2
Making deliveries in time	0	0	0	2	6	1.8	3
Offering a complete range of oils	0	0	1	2	5	1.5	4
Offering a wide range of organic products	0	0	2	1	5	1.4	5
Suppliers characteristics for less-expensive restaurants (n.10)							
Ensuring complete supply throughout the year	0	0	0	0	10	2.0	1
Making deliveries in time	0	0	0	0	10	2.0	2
Ensuring small supplies	0	0	0	1	9	1.9	3
Offering a complete range of oils	0	0	0	0	7	1.4	4
Offering a wide range of organic products	0	0	3	0	7	1.4	5

Note: -2= Strongly disagree, 2= Strongly agree

The positive scores given to each of the characteristics in the table, indicate that the restaurant managers agreed that all of these characteristics are essential and need to be present for the supply of organic olive oil. Both types of restaurant managers gave the highest scores for "ensuring complete supply throughout the year" (1.9: expensive restaurants and 2.0: less-expensive restaurants), "ensuring small supplies" (1.9: expensive restaurants and 1.9: less-expensive restaurants), and "making deliveries in time" (1.8: expensive restaurants and 2.0: less-expensive restaurants). They were both slightly less-interested in "offering a complete range of oils" (1.5: expensive restaurants and 1.4: less-expensive restaurants) and in "offering a wide range of organic products" (1.4: expensive restaurants and 1.4: less-expensive restaurants).

•Restaurateurs' interest in using organic olive oil in the restaurant

When the managers were asked if they were interested to use the organic olive oil in the restaurant, their answers were as follows:

Table 45. Interest in using organic olive oil

	Expensif **(n.8)**		Less-expensif **(n.10)**	
Interest	**no.**	**%**	**no.**	**%**
Yes	8	100	7	70
No	0	0	3	30

Almost all managers were interested to serve organic olive oil in their restaurants (100%: expensive restaurants and 70%: less-expensive restaurants).

•Restaurateurs' preferences for the communication strategy of organic olive oil to customers

Restaurateurs who were interested to serve organic olive oil (N.15), were asked to specify the way they would like to communicate the product to their customers.

Table 46. Preferences for the communication strategy

	Expensif **(n.8)**		Less-expensif **(n.7)**	
Communication strategy	**no.**	**%**	**no.**	**%**
Labeled bottles on tables	5	63	2	29
Evidence in the menu	4	50	3	43
Trained stuff	0	0	2	29
Leaflets	1	13	0	0
Videos	0	0	1	14

Note: several answers were possible

The managers of expensive restaurants prefer the most to communicate organic olive oil through "labeled bottles on tables" (63%), they prefer less the "evidence in the menu" (50%) and prefer the least the distribution of "leaflets" (13%). However, they don't prefer at all to do it through "videos".
On the other hand, the managers of less-expensive restaurants prefer the most to communicate the product through "evidence in the menu" (43%), they prefer less the "labeled bottles on tables (29%) and the "trained stuff" (29%) and prefer the least "videos". However, they don't prefer at all to communicate it through the distribution of "leaflets".

• Restaurateurs' willingness to pay for organic olive oil

All the restaurateurs who were interested to use organic olive oil, were willing to pay for it. The premium prices that they are ready to pay are presented in the following table 47:

Table 47. Willingness to pay

	Expensive (n.8)		Less-expensive (n.7)	
Premium price	**no.**	**%**	**no.**	**%**
<5%	3	38	3	43
5-10%	2	25	2	29
10-20%	3	38	1	14
20-30%	0	0	0	0
>30%	0	0	1	14

The managers of expensive restaurants are willing to pay higher premium price for organic olive oil than those of less-expensive restaurants. In effect, (38%) of the first are ready to pay up to 20% more for organic olive oil, while only (14%) of managers of less-expensive restaurants want to pay this

premium price, and the majority of them (43%) want to pay <5% more for the product. Only the manager of one expensive restaurant was ready to pay more than 30% for the product which is the manager of the organic restaurant "Tawlet-Souk-el-Tayeb" who declared that he is ready to buy the organic olive oil whatever was its price, in order not to maintain the consumers trust at the restaurant management system.

• Restaurateurs' perceptions about the future potential of organic olive oil in the Lebanese restaurants channel

The future potential of organic olive oil in the Lebanese restaurants was perceived differently by the restaurant managers.

Table 48. Perceptions about the future potential of organic olive oil in the Lebanese restaurant channel

	Expensive (n.8)		Less-expensive (n.7)	
Perceptions	**no.**	**%**	**no.**	**%**
There will be a rapid growth	0	0	3	43
There will be a slow growth	5	63	2	29
I don't think there is a potential	0	0	0	0
I dont know	3	38	2	29

Both types of managers perceived that there will be a future potential for organic olive oil in the Lebanese restaurants. However, the managers of less-expensive restaurants were more optimistic about the future potential of organic olive oil; the majority (43%) perceived that there will be a rapid growth of the demand for the product in the Lebanese restaurants, while the majority (63%) of managers of expensive restaurants perceived that there will be a slow growth.

Conclusions and recommendations

Eating out in restaurants is fundamental for Lebanese people who frequent restaurants not just to eat but also to socialize. Lebanese customers visit restaurants very frequently, and this habit is not restricted to specific types of customers. Customers having different ages, and different purchasing powers showed to have similar dining-out habits. Moreover, Lebanese consumers are becoming more restaurant-educated and more demanding in terms of restaurant hygiene and food safety. They prefer the most to frequent restaurants where safe food is prepared and served in a clean environment. However, the concept of organic dining is still limited among the Lebanese restaurants serving Lebanese traditional meals. Today, only one restaurant "Tawlet Souk-el Tayeb", situated in the heart of Beirut, is certified as organic. This restaurant does not follow a menu because seasonal food is provided and variety of traditional meals is guaranteed, along with freshness and taste.

The main aim of this research study was to investigate the market opportunities for organic olive oil in the Lebanese restaurants and to give insight into the restaurant customers' perspectives towards the consumption of meals prepared with organic olive as well as the restaurant managers' perspectives towards the use of organic olive oil.

Data from the restaurant consumers survey indicated that there is a widespread knowledge about organic foods among the Lebanese restaurant consumers. A considerable number of respondents have already experienced organic food products from different market channels, however, the high price of products is still limiting some other consumers to do it.
Moreover, there is a high interest in future consumption of organic foods in restaurants, especially organic olive oil which benefits are well-known by Lebanese consumers. In fact, respondents had no relevant barriers to consume organic olive oil in restaurants, more precisely they did not give important considerations to the higher price of meals prepared with organic olive oil and were motivated by its healthy aspect, better quality and its contribution to environmental protection. In addition, consumers expressed positive intentions to purchase meals prepared with organic olive oil (the average WTP obtained was 3.16$) and were more probable to pay 5$ more on the meal price when they were more educated (university or postgraduate degree), consuming high quality oils at home (olive oil, extra-virgin olive oil and organic olive oil) and frequently visiting restaurant. However, they were less probable to pay this additional price when they were from large-sized families.
The profile of Lebanese consumers who are willing to pay additional prices for organic olive oil in the restaurant is closely similar to the profile of European consumers who pay for organic foods and thus organic olive oil in different market channels. Therefore, the fact that both restaurants can be considered an adequate market channel and organic olive oil can be an adequate product, induce to think that they can push not only promotion of the organic dining concept, but also the spread of knowledge about organic food in general in Lebanon.

Conclusions and recommendations

The most relevant outcomes obtained from the restaurant managers survey showed that managers are conscious that organic olive oil can be an important element for a successful differentiation strategy which can give an added-value as well as a competitive advantage for their restaurant. Almost all of them are interested to use the product in restaurants and perceived that customers would appreciate its use, especially if they put it in evidence in the restaurant menu. The majority of the managers are optimistic about the future potential of organic olive oil in the Lebanese restaurant channel, however, several factors are still affecting negatively their decisions to buy it. These factors are mainly related with the market aspects of organic olive oil like: high price, limited availability and difficult access to the product through direct marketing. Moreover, restaurant managers highlighted that introducing just one organic product to the restaurant, the case organic olive oil, is not enough and thus there is the need to implement a full organic menu providing a diversity of organic items to consumers. Therefore, in synthesis we can say that there is a potential for organic olive oil in the Lebanese restaurant channel and that restaurants can form a new target market for Lebanese producers of organic olive oil as well as it can be considered as a place of change which pushes further Lebanese consumers towards healthier dining-out habit.

Since the presence of organic olive oil in Lebanese restaurants is still very limited, some recommended strategies are given to better introduce the product to this market channel:

● The introduction of a new brand under the name of “Lebanese organic olive oil” into the Lebanese market will facilitate the recognition of domestic organic olive oil to consumers as well as the promotion of the product among the different market channels existing in Lebanon.

● The development of a successful marketing strategy which:

→ emphasizes the importance of Lebanese restaurants as a new market channel for organic olive oil:

→ encourages and orientates the Lebanese organic farmers to consider the restaurants as a new target channel allowing them to assure selling their products locally;

→ allows restaurants to have an easy and continuous access to organic olive oil provided with a fair price.

With regard to restaurant managers, it will be helpful to have a strategy which:

→ plans for the best way of promotion and communication of organic olive oil to the customers inside the restaurant, as for example, putting organic olive oil in evidence in the restaurant menu, providing labeled bottles of organic olive oil on the tables and/or providing monodose samples of organic olive oil;

→ addresses to potential target consumers with the following features: they are regular restaurant customers, mainly young, highly educated, already consuming high quality olive oil at home and earning a relative high income yearly.

Conclusions and recommendations

Regarding methodology, to better elaborate future research about the market of organic products in Lebanon, some recommendations are given:

● a larger sample of Lebanese restaurants needs to be formed and investigated to be more representative.

● a team work needs to collaborate and join efforts to help accomplishing the survey in the best way.

● the restaurant customers questionnaire needs to be shorter, including a lower number of questions, since some respondents complained of its length and considered it time consuming.

● all interviewed customers need to be assisted in filling the questionnaire to be sure they answer to the total number of questions in a proper way.

Conclusions and recommendations

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Annex 1

Restaurant consumers survey

SCREENING QUESTIONNAIRE

The scope of this questionnaire is to check how the customers choose specific restaurant and food type(s), to investigate if they know about organic products and if they are interested to consume these products in the restaurant in order to study if they are motivated to buy and are willing to pay for a specific organic product-the organic olive oil - in the restaurant.

Section I- Dining-out habit

1-How many times do you frequent a restaurant per month?

☐ Once

☐ 2-4 Times

☐ More than 4 times (specify): …….

2- How much do you usually spend for eating at the restaurant? (Please indicate the meal price excluding beverages)

☐ < 20$

☐ 21-40 $

☐ 41-60 $

☐ 61-80

☐ >80 $

3- What are the main reasons why you usually visit the restaurant?
4-

☐ Lunch breaks

☐ Specific occasions

☐ Meeting with friends

☐ Business meeting

☐ Others(specify): .....

3-How much do you agree with the following statements related to your decisions about restaurant choice?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Preferences	**1**	**2**	**3**	**4**	**5**
I prefer restaurants where I can afford the price of meals					
I prefer restaurants where I can consume better quality food per price paid					
I prefer restaurants where I can find innovative and differentiated food or ingredients					
I prefer local restaurants providing local food					
I prefer restaurants where I can trust that food is prepared in a clean environment					
I prefer restaurants where the stuff and waiters are providing a good service					
I prefer restaurants suggested by my friends or my family					

5- How much do you agree with the following statements related to your decisions about food choices in restaurants?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Preferences	**1**	**2**	**3**	**4**	**5**
I am enthusiastic about trying new and differentiated foods and ingredients					
I am concerned about eating healthy and fresh food					
I am concerned about eating safe food					
I am concerned about the meal prices					
I have specific food concerns when I go eating out					

Section II- Customers' knowledge about organic products

6- Do you know what are organic products?

☐ Yes

☐ No ***(If the answer is No,* please answer to Question 7 and then end the questionnaire)**

7- Would you like to taste and learn about organic products in the restaurant?

☐ Yes

☐ No

8- Can you give a short definition for organic products?
…….....
……

Section III- Customers' attitudes towards organic products

9- Did you ever purchase any organic product? (Please fill the following table)

Organic Products	☐ **Yes, I already purchase organic products** *(Please indicate which product(s) you have already purchased)*	☐ **No I don't purchase, but I am interested to purchase some organic products in the future** *(Please indicate which product(s) you are interested to purchase)*	☐ **No I don't purchase and I am not interested to purchase any organic product in the future**
Fruits and vegetables	☐	☐	
Cereals	☐	☐	
Bakery products	☐	☐	
Sweets	☐	☐	
Oils	☐	☐	
Meat	☐	☐	
Dairy products	☐	☐	
Others (specify): ……..	☐	☐	

If you don't purchase and you are not interested to purchase in the future any organic product, please indicate the reasons behind your decision to buy

☐ I don' t know where to find organic products
☐ I think the price of organic products is too high
☐ I don' t trust the organic labeling and certification
☐ I am not interested in organic products
☐ I have other reasons (specify): .....

10-What kind(s) of oil do you usually consume at home?

☐ Organic

☐ Extra-virgin

☐ Olive oil

☐ Seeds oils (Specify): …….

Section IV- Customers' attitudes towards the consumption of organic olive oil in restaurants

11-How much do you agree with the following statements which could express your reasons to have organic olive oil in the restaurant?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Statements	1	2	3	4	5
I prefer organic olive oil because it is healthier					
I prefer organic olive oil because it is of better quality					
I prefer organic olive oil because it contributes to the environmental protection					

12-How much do you agree with the following statements which could affect positively your decisions to have organic olive oil in the restaurant?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Statements	1	2	3	4	5
The organic olive oil is mentioned in the restaurant menu					
The restaurant provides Monodose samples of organic olive oil					
The restaurant provides small labeled bottles of organic olive oil where the organic label is evident					
The restaurant distributes leaflets and brochures about the organic olive oil					

13- How much do you agree with the following statements which could affect negatively your decisions to have organic olive oil in the restaurant?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Statements	1	2	3	4	5
The lack of interest in organic olive oil in the restaurant					
The lack of trust in the management system of the restaurant					
The lack of trust in the organic certification system					
The high price of meals prepared with organic olive oil					
The need for a food quality regulation system for Lebanese restaurants					

14- Would you like to order meals prepared with organic olive oil in the restaurant?

☐ Yes

☐ No

15-How much would you like to pay more for meals prepared with organic olive oil in the restaurant?

☐ Same price as meals prepared with non-organic olive oil

☐ +1 $

☐ +2 $

☐ +3 $

☐ +4 $

☐ +5 $

☐ +6 $

☐ +7 $

☐ +8 $

☐ +9 $

☐ +10 $

☐ > +10 $(specify): ……

Section V-Customers' profile

16- Gender

☐ Male

☐ Female

17-What is your age? .....

18-What is your educational level?.

- ☐ Low education (8 years)
- ☐ High school education (12 years)
- ☐ University or post graduate education (over 12 years)

19-What is your income level (per year)?

- ☐ 0 - 10,000 $
- ☐ 10,001 - 20,000 $
- ☐ 20,001 - 30,000 $
- ☐ 10,001 - 40,000 $
- ☐ 40,001 - 50,000 $
- ☐ 50,001 - 60,000 $
- ☐ 60,001 - 70,000 $
- ☐ 70,001 - 80,000 $
- ☐ 80,001 - 90,000 $
- ☐ 90,001 - 100,000 $
- ☐ > 100,000 $

20- Where are you from and where do you live?
.....

21-How many persons compose your family?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ > 4

Annex 2

Restaurant managers survey

SCREENING QUESTIONNAIRE

Section I-Restaurants characteristics

1-Restaurant Name: …….

2-In which year did your restaurant start his activity?……

3-What kind of restaurant is yours?

☐ Independent

☐ Chain restaurant

4-How many consumers can you host in your restaurant? ……..

5-Which are the types of consumers who usually frequent your restaurant?
(Please indicate for each type of consumers its percentage (%) on the total consumers)

Type of consumers	**(%)**
Families	
Business persons	
Couples	
Group of young friends	
Group of adult friends	
Others (specify): …….	

6-What is the average meal price per person without drinks in your restaurant?

☐ < 20$

☐ 21-40 $

☐ 41-60 $

☐ 61-80

☐ >80 $

Section II-Knowledge about organic foods

7-Do you know what are organic foods?

☐ Yes

☐ No

If the answer is No, the interview is closed at this level. Thank you for your collaboration

Restaurant manager survey

QUESTIONNAIRE

Section III- Potential for organic foods

8-Would you give a short definition for organic products?
……
……

9-Do you serve any organic product? (Please fill the following table)

	☐ **Yes , I already serve some organic products** *(Please indicate which organic product(s) do you already serve)*	☐ **No, but I am interested to serve these organic products in the future** *(Please indicate which organic product(s) are you interested to serve)*	☐ **No, I am not interested at all**
Fruits and vegetables Cereals Bakery products Sweets Oils Meat Dairy products Others(specify): ……	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	

Section IV- Oils in restaurants

10-Which condiments do you use for meal preparation? (You can choose more than 1 answer)

☐ Vegetable oils
☐ Butter
☐ Margarine
☐ Others (specify) : ……

11- Which types of oils do you use for meal preparation? (Specify for each type: its usage, quantity consumed, cost and origin)

Oil Type	**Usage:** Frying **(F),** Cooking **(C)**,Dressing **(Dr),** Decorating **(De),** Others **(O)**	**Quantity** Consumed per month**(L)**	**Cost** Per month **($)**	**Origin** Local **(Lo),** Lebanese **(Le),**Imported **(I),** I don't know **(X)**
☐ Organic olive oil				
☐ Extra-virgin olive oil				
☐ Refined olive oil				
☐ Olive oil				
☐ Other vegetable oils (Specify):……				

12-What is the Type, Size and Material of packaging of the oils used in the restaurants?

Oil Type	**Type**: Monodose **(M),** Bottle **(B),** Can **(C),** Gallon **(Ga),** Box **(B),** Other and specify **(O).** **Size** (Specify the size in liters: (L) **Material** Plastic **(P),** Glass **(G),** Tin **(T),** Other and specify **(O).**
☐ Organic olive oil	
☐ Extra-virgin olive oil	
☐ Refined olive oil	
☐ Olive oil	
☐ Other vegetable oils (Specify):……	

13-Which type of oil suppliers do you deal with? (Please indicate for each type of suppliers the percentage (%) on the total oil suppliers with respect to the purchased quantity).

Type of suppliers	**(%)**
Producers	
Producer markets	
Middleman	
Supermarkets	
Organic shops	
Others (specify): ……	

Section V- Restaurant manager attitudes towards serving organic olive oil in the restaurant

14-How much do you agree with the following statements which could express your motivations to buy organic olive oil for your restaurant?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Statements	**1**	**2**	**3**	**4**	**5**
Personal preference regarding the organic production practices and standards					
Trust in organic olive oil producers					
Trust in organic certification					
Being part of an organic network					
Availability of the organic olive oil					
Access to the organic olive oil through direct marketing					
Fair price of the organic olive oil					
Advice from suppliers of organic products					
Recognition of the variety of olives used in organic olive oil					
Actual growing demand for the consumption of organic products					
An opportunity to educate consumers about organic products					
Added-Value for the restaurant: providing differentiated products					

15- How much do you agree with the following factors which could constitute a barrier for you to buy organic olive oil for your restaurant?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Factors	**1**	**2**	**3**	**4**	**5**
Personal disinterest towards organic products					
Limited availability of the organic product					
Difficult access to the organic product					
High price of the organic olive oil					
Absence of enough demand for organic products					
Absence of consumers knowledge about organic products					
Unskilled chefs and waiter stuff					

16-How much do you agree with the following statements which could express your opinion about customers behavior towards organic olive oil in the restaurant?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Statements	**1**	**2**	**3**	**4**	**5**
Customers know the organic olive oil					
Customers know and are interested in environmental issues					
Customers are concerned with nutrition when dining-out					
Customers consider that it is enough that meals are good and fresh					
Customers are conscious about the benefits of organic food					
Customers would prefer the small bottle of organic olive oil on tables					
Customers would appreciate the usage of organic olive oil in the restaurant.					

17-Which type(s) of supplier of organic olive oil would you prefer?

- ☐ Producers
- ☐ Producer markets
- ☐ Middleman
- ☐ Supermarkets
- ☐ Organic shops
- ☐ Others (specify): ……..

18-How much do you agree that the following characteristics of suppliers are important for you to buy organic olive oil in your restaurant ?
(Please mark the level of agreement **from 1 to 5** in the table below:
1-Strongly disagree **2-**Disagree **3-**Neither agree or disagree **4**-Agree **5**-Strongly agree)

Suppliers characteristics	**1**	**2**	**3**	**4**	**5**
Ensuring complete organic olive oil supply throughout the year					
Ensuring small supplies of organic olive oil					
Making deliveries in time					
Offering a complete range of oils (Produced from different olive varieties, with different packaging sizes ranking from the monodose to the highest size)					
Offering a wide range of organic products (fruits, vegetables, bakery products…)					

19-Do you think that the use of organic olive oil could be a good marketing differentiation strategy for your restaurant?

☐ Yes

☐ No

20-In which way would you like to communicate the organic olive oil to your customers?

☐ Labeled bottles on the tables

☐ Evidence of organic olive oil in the menu

☐ Communication of the organic olive oil benefits through a trained restaurant staff

☐ Communication of organic olive oil benefits through leaflets in the restaurant

☐ Communication of organic olive oil benefits through videos in the restaurant

☐ Others (specify): ……

21- Are you willing to pay for organic olive oil a price higher than the other oils?

☐ Yes

☐ No

22-What premium price are you willing to pay for organic olive oil with respect to the oil price you already pay in your restaurant?

☐ < 5%

☐ 5-10%

☐ 10-20%

☐ 20-30%

☐ >30%

23-Do you think that there is a potential for organic olive oil in the restaurant channels in Lebanon?

☐ Yes , there will be a rapid growth

☐ Yes , there will be a slow growth

☐ I don't think there is a potential

☐ I don't know