

Intelligent Systems will lead to Cost Saving in Gastronomy Tourism

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Abstract - Gastronomy tourism is one of the significant and fast-growing sectors if one can nurture to meet food desires of tourists/visitors in the hospitality industry. When it comes to hospitality and tourism, United Arab Emirates (UAE) is one of the most influential countries in the world to attract visitors from all over the world. The country is known for popular sightseeing attractions and various fabulous man-made monuments, but there is very less literature available on Gastronomy tourism. What extent local cuisine of UAE is a noteworthy attraction to the UAE tourists? What is the potentiality of Gastronomy tourism in UAE to attract visitors? How can implementation of intelligent systems will lead to cost saving in Gastronomy tourism? The current study explores and finds the answers to these questions using empirical data collected from 362 respondents in UAE. With the help of SPSS, this study analysed frequency, correlation and Analysis of Variance (ANOVA) on the responses. Culinary community is one of the neglected sectors in the development of tourism sector in the world. The results of this study can gauge the significance of culinary community to the next level. The results of this study found that there is a positive correlation between implementation of intelligent systems and saving cost in gastronomy tourism. The results of ANOVA prove that there is a positive impact that implementation of intelligent systems in various segments of Gastronomy tourism will lead to cost saving and in turn can attract more tourists.

Keywords: Culinary, Tourism, Gastronomy, Societies, Social, Marketing mix, Indispensable, Authenticity, Disposable Revenue, Culture, MENA Region.

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INTRODUCTION

The size of forecasted market for culinary tourism is USD 82.02 Billion between 2019 and 2023. Development in integrated culinary and social opportunities are some of the key factors triggering to the development of the global culinary experience of the travel industry in the coming years. The growing number of culinary projects during the time of celebrations, travel and tourism is raising day by day and booming culinary tourism opportunities to gain access to a potential client base. Several travellers plan their vacations specifically for culinary trips and exploring diverse food cultures to experience and learn about local cuisine. According to global data statistics, travellers spend approximately 50% of their holiday expenditure on culinary events as given in the (Infiniti, 2019). This is one of the key factors for the growth of culinary tourism. In addition, the popularity of wine, beer and food festivals are enhancing culinary tourism (Transparency, 2019). According to Matlovičová & Husárová (2017), tourists always look for culture of different regions which is left by their old generations and its careful frontward advancements by the current

generations. Culinary tourism paves a platform to these customs and cultures of food preparations and servings.

Increased use of internet content and greater access of television channels and other entertainment venues, such as YouTube Cooking Channels, Travel Channels and Lifestyle Channels, brought awareness about other location to search for their local or traditional cuisine. In addition, celebrity cooks, celebrities and media endorsement of tour and travel are also key factors in the growth of the culinary tourism industry. Also, there is a growing trend of seasonal and festival tours that are driving the culinary tourism industry around the globe (Transparency, 2019). Culinary tourism is much wider and it has three forms namely: Gastronomic tourism, Gourmet Tourism and Cuisine Tourism. The current study is focused only on Gastronomic tourism and its potential in the fast emerging economy : United Arab Emirates (UAE).

Quality, status and prestige plays a key role in selection of gastronomic products based on regions.

These are the attractions through fairs, festivals, shows, events and local authentic restaurants. The Gastronomy tourism has enormous growth potential in the world tourism sector. However, there is more to be done in this segment as the scope of development is very vast. Food has always been an integral part of human life; hence it would be really easy to link this to the tourism experience. Currently at its infancy stage, this category has a huge potential for growth on its own as well as merging it with other travel activities such as sightseeing, adventure and cultural tours, also helps in improving the country's economy.

Food Tourism in Middle East and Northern Africa (MENA) Region

MENA is a large community of 14 nations in the Middle East and 4 nations in North Africa, including developed and developing destinations in the Mediterranean and the Arabian Peninsula to large-spending outbound markets from the Gulf Cooperation Council (GCC). The region has connections to all parts of the world and often act as a nucleus due to the advantage of connectivity. In the recent years, we have seen the taste of Middle Eastern food increasing tremendously even by the Westerners. Celebrity chefs, television shows, restaurants and supermarkets have embraced ingredients and dishes from the region. Some of the cuisines like Hummus, Falafel, and Muhammara have become familiar entities on trendy restaurant menus and mainstays in home kitchens (**Organization, 2019**).

The Middle East food market has become a hub with growing opportunities because of the strategic geographic position and fast-growing population. Many countries in this region are heavily dependent on food imports. The GCC, in particular, is a home to a young population with high disposable income and a strong appetite for international cuisine and organic food products. Growing demand for new foodstuff opens wide-scale opportunities in front of international food suppliers. Dubai (one of the emirates of United Arab Emirates) serves as a re-export hub for hot beverages, due to the emirates ideal geographic position and trade connections. Growth within the Middle East's food and beverage market is compelled by its diverse consumer groups, which have an appetite for a wide range of cuisines (**Gulfood, 2018**). Consumers in the Middle East are progressively looking to attempt new types of cuisines and demanding for suitable delivery options which match to their busy lifestyles. These clienteles considered classy when it comes to their food eating habits and shopping, who devote on high quality and a balanced food. This region's hospitality sector is increasing and several new hotels and retail projects are still under construction, especially within the United Arab Emirates (UAE) and Kingdom of Saudi Arabia. In addition, there are plenty of attractive free-zones in the UAE, providing competitive rewards to

Food & Beverage (F&B) companies that inaugurate a presence in the country.

About UAE and its Food Tourism

The United Arab Emirates (UAE) is a federation of seven Emirates that mixes ancient heritage with vibrant urban areas making it one of the most significant economic centres in the Middle East. The official capital emirates of UAE are Abu Dhabi and tourism capital is Dubai. While historically conservative, the UAE is one of the most modern Gulf countries with Western preferences for fast food, gradually mixing with Middle Eastern norms.

UAE Food Tourism

UAE Food and Culinary Tourism is thriving, leading to a booming retail sector and sensible restaurants at the level of industry. Currently on a global level, Dubai ranks fourth in terms of the number of global overnight visitors and first in terms of spending in the F&B sector. Top-line restaurant operators have a huge influence on tourism. It is especially the case with foreign labels, most of which join the market in collaboration with local and national companies developing franchises. Tourism accounted for 12.1% of GDP in 2016 and is projected to rise over the next 10 years. The UAE has become a major hub for meetings, incentives, conventions and exhibitions (**Paul, 2019**). UAE though has come a long way by introducing variety of food festivals in the region, will now have to work towards enhancing this experience and combining this with the tourism. UAE has already been working towards strengthening their global Tourism as a part of their economic diversification. Today, this sector alone contributes far beyond AED 161 billion to national GDP and is expected to grow to AED 234 billion in the next 7 years (**Wam, 2019**).

The continuing success of the UAE restaurant chains is a good sign for the market as a whole, but it does imply intensified rivalry. The advent of multinational chain restaurants has often rendered it impossible for home-grown mom-and-pop restaurants to survive. For 138 hotel developments currently underway in the UAE, the pressure is expected to grow even more serious. As such, Dubai has always witnessed four new restaurants opening per day and one restaurant catering to every 260 people. Some smaller restaurants may not be able to compete in such a complex environment, but there are still opportunities for home-grown concepts- especially those that can combine Middle Eastern service and hospitality with industry expertise and best practices. The food scenes have improved dramatically in the past few years, acquiring measurable complexity and sophistication. It is remarkable to see the incredible development of food scenes in the UAE in terms of creativity, convenience and affordability, all rolled up in respect

of local love, talents and innovations, and knowledge of healthy living (Price, 2018).

The evolution of UAE's food scene has been captured by many tourists and with the concept of outlets serving UAE's food has increased. UAE is diverse country with different nationalities and cuisines which includes Latin American chains, Filipinos, Japanese, Mexican, French, Italian, Indian and so on. The UAE also provides a range of exclusive dining opportunities, such as dining alongside an immense aquarium, dining in pet-friendly cafes with your cherished animals, or indulging in a chocolate café that presents you with an endless selection of chocolate-based sweets and often presents you to real-gold edibles (Munyal, 2017). Emirati cuisine is the typical Arab cuisine of the UAE and has interesting parallels with the cuisine of neighbouring nations, such as Oman and Saudi Arabia, as well as other Asian and Middle Eastern cuisines.

Intelligent systems, incorporating technologies such as artificial intelligence (AI), machine learning, and data analytics, are increasingly recognized as pivotal tools in enhancing efficiency and reducing costs in various industries, including gastronomy tourism. This sector, which focuses on culinary experiences tied to travel, can benefit significantly from the integration of such technologies.

SIGNIFICANCE OF THE STUDY

Literature is available on Gastronomy Tourism but there is no empirical support to prove the impact of Gastronomy Tourism in the development of overall tourism sector of a country. Until today, Gastronomy is considered as a niche segment of travel tourism ignoring the fact that all the tourists definitely pay high attention on local cuisines while planning their travel. Therefore, Gastronomy can be one of the strong motivators for the development of tourism sector. On the other hand, two emirates in UAE out of seven emirates, Dubai and Abu Dhabi (Capital of UAE), are the most popular and influential emirates to attract visitors from the world. Dubai is most famous for fabulous sightseeing attractions, man-made monuments, shopping malls, indoor and outdoor theme parks and world's talent sky scrapers. However, local cuisine is not a noteworthy attraction to UAE in general and Dubai in particular. Without food and culinary comfort, UAE cannot remain as the seventh most-visiting city in the world with 16.3 million international visitors (Kamel, 2019).

What kind of cuisines do the visitors in UAE attract? What is the potentiality of Gastronomy tourism in UAE to attract visitors? What is the impact of Gastronomy tourism on UAE's tourism sector? How can implementation of intelligent systems will lead to cost saving in Gastronomy tourism?

The integration of intelligent systems in gastronomy tourism presents a promising avenue for cost savings and efficiency improvements. As these technologies advance, they offer significant opportunities to

enhance service delivery, personalize customer experiences, and manage operational costs. However, successful implementation requires careful planning, investment, and ongoing management to realize these benefits fully.

This study focuses on exploring the:

- Number of visitors considers Culinary is an important factor for deciding the holiday destination/s.
- Number of visitors in UAE has the knowledge on Gastronomy Tourism of UAE
- The type of cuisines more attracted by the UAE visitors
- Implementation of intelligent systems and cost saving in Gastronomy tourism

In addition, the current study finds

- The relationship between culinary tourism and tourist's preferences for destinations
- The impact of Gastronomy tourism on UAE Tourism sector

In a nutshell, the objectives of this study are, to explore existing knowledge on Gastronomy tourism of UAE Visitors and to find the potentiality of Gastronomy tourism as an effective marketing tool to promote destinations. In addition, this study sheds light to find the impact of Gastronomy tourism on UAE's tourism sectors to attract tourists. Finally, this research suggests and emphasizes to use Gastronomy Tourism as one of the power promotions tools to boost UAE tourism sector.

THEORETICAL BACKGROUND

Gastronomy Tourism

The word "Gastronomy" has been formed by the amalgamation of the Greek words "gaster – stomach" and "nomas – law". The motivation behind gastronomy is to keep up with the human wellbeing along with best nourishment and confirming the joy of the eating life and along with food and beverages being shaped in sterile environments and ready to be eaten which is palatable and visually pleasing (Sormaz, 2015)

Gastronomy tourism has become a new trend in contemporary tourism (Nistoreanu, Nicodim & Diaconescu, 2018). Food is perceived to be the second highest expense in the travel program. There are different definitions for gastronomy tourism, but all have the similar meaning, visiting a particular destination for food and its culture. However, trips to destinations for food may not be of the same reasons. For some it can be a primary reason for food tourism but for others it may not be the same. For its ease of use and fascinating existence,

gastronomy tourism is regarded as an alternate form of tourism for rural areas.

Depending upon the power and the level of the effect of food for types of food tourism, high scope for development of various (gourmet, tourism) forms of travel industry. The types of tourism depends upon the degree of the enthusiasm for food and in culinary items (Williams, Yuan and Williams, 2019). Another study conducted by Sittisom & Srimarut (2020), describes the relationship between food service quality, innovation in production, customer satisfaction, and local product promotion. These studies proves that, food and food products are on high demand from the visitors.

Gastronomy Tourism in the World

In the recent world, Tourism is not limited to visiting mountains, beaches, sea, forts, resorts or adventures. Along with all these, one of the main triggers is local cuisine. Travellers tend spend 30% of their expenses for 3 meals in a day and exploring the local and authentic cuisine has become the need of the hour and definitely has a huge potential of gaining more importance leading to a greater **evolution** in the gastronomy tourism.

According to Kurlansky (2010), food is a central activity of mankind and one of the single most significant trademarks of a culture. Sushi, is said to have originated in China and then became widespread in the South East Asia countries. Narezushi, appeared in Japan during the 8th century and was meant to be eaten during festivals and celebrations. Japan has taken wide initiatives to cultivate and promote food tourism. Right from introduction of travelling restaurants to enhancing the educational facilities focussed on training chefs, Japan has come a long way in developing Gastronomy Tourism (Kubo, 2019). A study conducted by Civic and Cilimkovic (2017) found through their research that there is a high level of consumer confidence to buy domestic food products through various food events.

Southeast Asian Countries are famous for their street food and many countries have their foods as major tourist attractions. Availability of authentic food and at reasonable prices have been an attraction of these places which in turn have boosted up their tourism industry. A bibliometric review was undertaken in order to give a full insight and to allow them push ahead on the next phase in delivering quality goods and services to both users and visitors.

RESEARCH METHOD

This study is in explorative and empirical in nature. Primary and secondary sources of data have been used. Primary data has been collected through a well-structured questionnaire, which was pilot tested with 22 samples and validated with Cronbach Alpha. After the results of pilot test, the questions have been condensed and modified to 14 questions from 21 was the initial number. The questions formulated to find the

impact of Gastronomy on UAE tourism sector has been designed using Likert 5-point scale and other questions are dichotomous in nature. Primarily, this was given as an assessment named, 'non-teaching course component' to the Bachelor's degree student who helped to collect primary data from the respondents. The respondents are visitors/tourists in UAE. Although, study aimed to collect from 500 respondents due to various reasons ended up finalising only 362 fully filled in responses for including and performing the results. Data collected from respondents by meeting and requesting the visitors/tourists in the various destinations of UAE mostly from Dubai like Burj Khalifa, Dubai Mall, Dubai Fountain, City centres randomly with hard copy of questionnaires. Also, a small percentage (approximately 2%) includes visit visa tourists who can reside in the country for three months and their purpose of visit is to spend and support their close family.

After studying the existing literature, it was found that there is a very little literature available on Gastronomy tourism, which is insufficient to draw conclusions by different nations. As per the knowledge of authors, there is no existing study available on UAE as such to find the impact of Gastronomy tourism on UAE Tourism sector and this current study is unique and first on the country. The present study proposes the below alternate hypotheses:

H1: There is a significant positive relationship between culinary tourism and tourist's preference for UAE destination

H2: There is a positive association between intelligent systems and cost savings in Gastronomy tourism

Study used SPSS for data analysis, Frequency tables, multivariate correlation and linear regression has been used to find the required results.

RESULTS AND DISCUSSION

Table 1: Descriptive Statistics

Headings	Frequency	%
Gender		
Male	182	50.0
Female	180	49.5

Nationality		
Asia	337	93.09
Africa	1	0.00
Europe	16	4.41
Australia	1	0.00
America	7	1.93
Age Group		
19 years and below	77	21.2
40 years – 20 years	199	54.7
55 years – 41 years	63	17.3
74 years – 56 years	18	4.9
75 years – 95 years	5	1.4

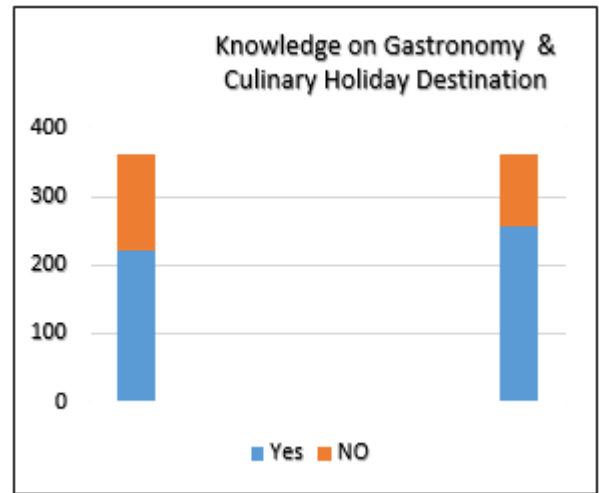


Figure 2: Categorical Analysis

Table 3: Categorical Analysis

Factors Influence the Holiday Destination		
Weather	34	9.3
Accommodation	70	19.2
Cost	200	54.9
Food (Cuisine)	56	15.4
Site Seeing	2	.5
Others	-	-
Do you agree that implementation of intelligent systems will lead to cost savings in Gastronomy tourism		
Agree	244	67.4%
Do not agree	79	21.8%
No idea	39	10.7%S

(Source: Primary data analysis by authors)

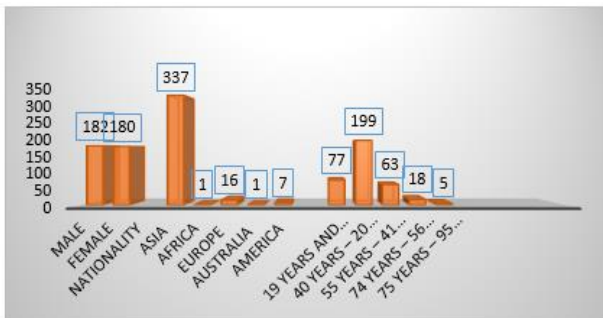


Figure 1: Descriptive Statistics

Table 2: Categorical Analysis

Knowledge on Gastronomy		
Yes	220	60.4
No	142	39.0
Considering a certain culinary holiday destination		
Yes	256	70.3
No	106	29.1



Figure 3: Categorical Analysis

Data analysis has been conducted on 362 responses, it includes 182 male respondents and 180 female respondents in UAE. Majority belong to Asian continent (93%) presented in Table 1. When it comes to age group of respondents 54.7% (Figure 1)

of the respondents belongs to 20 to 40 years, followed by 19 years, and below is 21%. According to the study, the results (out of 362 respondents 60% (rounded)) show that the respondents are aware of gastronomy tourism in the MENA area but are not completely (another 40%) aware about this tourism in the UAE (Figure 2). The Official Ministry of Culture and Tourism needs to step up the efforts in order to reinforce UAE as a potential culinary destination. The growth of culinary tourism in the UAE would not only draw many more visitors to the region, but would also allow the citizens of the country to have a more diverse experience.

Results show that 70% (Table 2) of the respondent's care and consider culinary is an important factor while selecting a holiday destination (Figure 2). Subsequently, the other factors, such as cost, accommodation, weather, food are falling under below 15% of preference. 47% (173) respondents are not aware about the presence of food tourism in UAE. This result is shocking (Table 3) as many tourists in UAE are not familiar and/or not visiting the country for the reason of local cuisine but other factors. 35.7 percent of respondents (130) expressed that they are aware about food tourism in UAE. Whereas, when it comes to find the interest towards type of cuisine, only 17% (rounded) told that they knew about regional cuisine, 11% expressed their interest and most of them (22%) favoured international cuisine. These results depict the local tourism sector has to thrive to raise their standards of presence to add their contributions to the country's growth.

Correlation

This study used correlation coefficient to test the first hypothesis i.e. H1: There is a positive significant relationship between culinary tourism and tourist's preference for UAE destination. Multivariate Pearson correlation has been used to find the relationship between the variables, reasons for visiting UAE & UAE local cuisine and UAE other factors. From correlation of the variable Table 4 it is apparent that there is a strong correlation between visitors selecting UAE as a visiting destination because of other factors is very significant with 0.609. Whereas, the relationship between visitors visiting UAE for local cuisine is depicting a weak correlation by 0.303. These results highlight the importance of paying attention to bring UAE local cuisine into limelight. Based on the results, this study rejects the hypothesis 1 and concludes that there a positive relationship (0.303) between UAE as a preferred destination and local cuisine but which is not very significant.

Table 4: Correlation

	Reasons for Visiting UAE	UAE local cuisine	Other factors
Reasons for visiting UAE	1		
UAE Local Cuisine	0.303	1	
Other factors	0.609	0.212	1

(Source: Primary Data Analysis by authors)

H2: There is a positive association between intelligent systems and cost savings in Gastronomy tourism

To test this hypothesis, we have taken the variables of intelligent systems plays an important role in saving the cost of Gastronomy tourism. F-Statistic is used to measure the variances of data which are scattered from the mean. One-way ANOVA (Table 5) has been calculated by using SPSS to determine whether group means are equal or not. The level of significance for this test is 5% (i.e. 0.05) and Fisher's F -Value is 3.734, hence, this study rejects the null hypothesis and accepts the alternate hypothesis. In a nutshell, there is a positive impact that implementation of intelligent systems in various segments of Gastronomy tourism will lead to cost saving and in turn can attract more tourists.

Table 5: Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F Value	Sig
1	Regression	3.000	3	1.000	3.734	.011
	Residual	95.884	358	.268		

(Source: Primary data analysis by authors)

CONCLUSION

This study concludes that the Gastronomy Tourism awareness is present in UAE, however is limited compared to the required and capability. This industry has to adopt various measures to grab fast progress and to establish their flag in the international market. The whole idea of this study to shed light on Gastronomy Tourism marketing has to be geared up and the tourism industry will have to ensure to use various means to ensure this is developed. Enhancing the culinary tourism experience could result in a major source of revenue and foreign exchange. The tourism industry will however have to work towards creating awareness of this amongst people. Letting the tourist experience the local food be it by the way of eating or also by way of cooking would definitely have a huge impact. Working towards combining the food and the travel culture will go a long way and will not only enhance the tourist experience but will also contribute towards further increase in the GDP.

Data has been collected and conducted analysis by taking into consideration of 362 fully filled in robust questionnaires. Majority of the respondents are aware about the Gastronomy tourism but in UAE the awareness regarding this is very low. There is high potential for the development of culinary cuisines as one of the major attractions of UAE. The ANOVA results of this study rejects the null hypothesis and accepts the alternate hypothesis stating that there is a positive impact that implementation of intelligent systems in various segments of Gastronomy tourism will lead to cost saving and in turn can attract more tourists.

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