



Review Article

Journal of New Tourism Trends (JOINNTT) 2(2), 209-219, 2021

Received: 17-Nov-2021 Accepted: 16-Dec-2021



SAKARYA UNIVERSITY
OF APPLIED SCIENCES

A Conceptual Assessment of Current Trends in the Restaurant Industry Accompanied with Future Forecasts¹

Ülker CAN^{*} 

^{*}Batman University, Hasankeyf Vocational School, Turkey. ulker.can@batman.edu.tr

ABSTRACT

The global structure deeply affects many areas with all its dimensions. Therefore, the common industrial structure adds contemporary trends to our lives. Current and future trends can be examined under factors such as extraordinary situations (pandemic, etc.), technology (industry 4.0, etc.), sustainability phenomenon (environmentally friendly practices, etc.). In this context, restaurant businesses, which are one of the components of the tourism industry, attract attention with their emerging new trends. Modern restaurant business requires the introduction of various aspects of sustainability, innovation, and new approaches in communication with consumers, as well as the implementation of new restaurant trends. It is very important for restaurant businesses to know both themselves and their customers in the current period. And also in this century, to be aware of the dynamics of the current market is indisputable necessity. It is worthwhile for businesses to develop strategies in this direction with the awareness of their strengths and weaknesses. In this context, in this study, it is aimed to evaluate the trends and forecasts in the restaurant industry holistically, to contribute to the literature and to offer suggestions to the relevant stakeholders.

Keywords: *Restaurant industry, restaurant business, customer, technology, trends*

1. Introduction

Restaurants, as a part of the cultural life of a city, offer sacred places where one can enjoy dining and communication along with experiencing many other things. In addition to responding to the impacts of globalization, restaurant businesses are also indicators of tendencies, trends and shifts in cultural taste, social behaviors and habits of people (Preston-Whyte, 1999).

In the fierce competition of the 21st century that pushes it to the limits, surviving and keeping profitable have become almost impossible for the businesses most of which may face serious troubles such as going bankrupt in the very first year of their opening. Restaurant businesses have become one of the most competition-intensive industries due to the pressure caused by various reasons such as wide variety

¹ This paper was presented at the I. International Mesopotamia Tourism Congress in November, 2021.

of products, rapid changes in trends and habits, widespread chain stores and proliferation of business types and number (Sarıışık, Çavuş and Karamustafa, 2019).

In the restaurant industry, the ability to adapt to newly emerging conditions in the current market structure is strategically important. Adaptation of new technologies to customer service process and taking steps to predict further advancements in the restaurant business are the success indicators of today's businesses (Khamidovich, 2021).

2. Current and Future Trends in the Restaurant Industry

In this current market structure that is becoming more competitive every new day, restaurants are making every effort to keep their doors open. From offering new and creative presentations and trends to beneficial products and innovative technologies, adapting the restaurant trends to the restaurant model requires a strategic understanding which is beyond technical activities. Due to the fact that not all service sector trends can be adapted to restaurant services, the best approach is to determine the customer-centric restaurant business trends that can be easily adjusted according to the type of the business, employment number, location and assets (Kurtz, 2020). In this approach, current and future trends in the restaurant industry can be discussed under the factors of "extraordinary situations", "technology" and "sustainability".

2.1. Extraordinary Situation (COVID-19)

Restaurants were hit by the COVID-19 pandemic in early 2020, which caused serious crises in the businesses operating in the service industry. Because of the pandemic-related regulations put into effect by the governments, business operations of restaurants were suspended. Additionally, restaurants have not been able to recover to the pre-pandemic levels as people preferred to stay away from the others even after reopening. Limited seating capacity of the restaurants due to social distancing rules implemented by the governments and other precautions forcing the restaurants to deliver only take-away services without seating customers pose serious threats in terms of predictions related to future of the restaurants. A great majority of experts predict that more than half of the restaurants will not survive this current course (Severson and Yaffe-Bellany, 2020). For this reason, keeping the consumer demand live during the times of crises is of crucial importance (Sigala, 2020). It is a well-known fact that any planning in the world cannot control the future. However, the power of restaurants to adapt to the new normals imposed by the emerging rules may also be rewarding for the restaurants in terms of gaining competitive advantages (Can, 2021).

In a study carried out by Norris et al. (2020), the outputs of Covid-19 in restaurant industry are defined under three comprehensive themes; "expansion of take-out operations", "innovative practices" and "community outreach/corporate support".

Expansion of take-out operations

- (1) Adjusted operating schedule and employee roles
- (2) Re-imagined dining rooms
- (3) New/limited/rotating menu items
- (4) Online ordering and third-party delivery
- (5) Collaboration
- (6) Communication with customers and employees

Innovative practices

- (1) Pop-up markets/grocery store partnership
- (2) Family meals/meal kits

- (3) To-go cocktails/beer/wine
- (4) Food with a side of fun
- (5) Additional revenue streams

Community outreach/ Corporate support

- (1) Community/employee outreach
- (2) Production of hand sanitizer
- (3) Corporate donations/grants and funds

The restaurant industry began to benefit more from the power of digitalization especially after the pandemic. Integrating different delivery options into the systems is particularly important in terms of providing competitive advantage. With online ordering systems and mobile ordering applications, third-party order delivery services began to be used. Major marketing companies operating in the service industry have recognized the value of takeaway order delivery options for the restaurants, which led many of them to offer restaurants third-party delivery services as they can no longer manage the delivery services by themselves. Among these companies are Google, Amazon, GrubHub, UberEats, DoorDash, Postmates and many other companies including a set of local takeaway order services (Elkins, 2018). The successful and big online food ordering platform of Yemeksepeti and that of Getir's are very similar to the ordering service given by Uber Eats.

The digitalized world and sophisticated consumer demands have led to a new range of restaurant types which aims to make it possible for the customers to eat whatever they want, where and when they want it. The digital process that is accelerated by the pandemic has brought the delivery-only restaurants, virtual restaurants and ghost kitchens to the restaurant industry. In some markets, these virtual kitchens are often called as satellite or cloud kitchens. This satellite/virtual ghost concept, which is invented by restaurants to meet the increasing online orders, has evolved into new business models (NRA, 2019).

Paket Mutfak startup that allows restaurants to open new delivery-only branches without making any founding investment is the first example of national cloud kitchen in Turkey (Paket Mutfak, 2020). Paket Mutfak startup makes the installments and set up at the restaurants that want to join this kitchen system and it also affords various costs such as courier operational activities necessary for delivery, order management and payment collection process, security and maintenance. Such restaurants do not offer its customers seating place since they create a delivery-only network (Yeşilyurt and Kurnaz, 2021).

Digitally created and designed QR Menus that businesses rapidly adapted due to the pandemic are among the new modern trends. A QR code menu is a digital menu that's accessible for diners and drinkers on their smart phones after scanning a QR code. All customers have to do is point their mobile device and scan the QR code (which virtually all mobile devices can do) and they're immediately taken to a touchless menü (SproutQR, 2021).

2.2. Technology

Restaurant businesses need good food and good services to sustain their existence and be successful in the relevant market segment. Along with this unchanging trend, it sheds light on the issues that need to be focused on "technology and data" in the next 10 years. In the restaurant industry, where data-based decisions can drive growth, the main reason for success is that technology is now in a position to support it. As the restaurant industry continues to innovate based on technology and adapt its data from consumers to ever-changing consumer tastes and preferences, these drivers will be catalyst for expansion into the future.

In their study, Leung and Loo (2020) suggest an extensive framework about how smart technologies and value creation are integrated into the whole dining experience. This study highlights the dining experiences that are offered to customers by integrating various technological tools into the value creating process. Findings point to smart technologies and dining experiences. The search for smart dining experience is positioned as a trend that seems likely to continue in the predictable future. The critical goals of smart technologies are to help the restaurant business owners and restaurant customers develop a customized and interactive relation in order to create unforgettable dining experiences. In this way, customers will be very happy and they will not only prefer to revisit the restaurant but they will also disseminate their positive comments and feedback to the others. In other words, smart technologies can empower the restaurant business owners and service providers to achieve high productivity and efficiency in terms of delivering high quality products and services, as well as to establish an affinity with their customer base. By this way, restaurant businesses will be able to run or even grow their business more conveniently in a highly competitive environment. Smart technology applications in different food stages and during experience cycle are listed in Table 1.

As an outcome of technology, processes are facilitated and accelerated on the one hand, and on the other hand interactive communication, customization and competition increase every new day. Consumers' expectations from businesses and products are increasing day by day. Businesses are reaching their consumers through different channels in order to deliver their services and to meet their expectations. It can be said that technology is the main reason of this change in marketing, whether it is because technology directly affects processes or indirectly affects people that are the primary element of marketing (Erdemir and Özoğlu, 2021).

Table 1: Smart Applications for Dining Experience in Each Dining Stage

	Pre-Dining	During-Dining	Post-Dining
Connect and Expectation Formation	Social Media		CRM
	Mobile App		Tracking App
	Location Based Push Message Geofencing		
	AI Quality Control		
Interaction and Value Co- creation	Queue Management	Automatic food delivery	Online Payment at table
	Translation	Drone photo capture	Food wastage monitoring
	Voice ordering	Robot Service	
	AI Recommender System	3D printer	
	Holographic/Gamification	Eating Assistance	
	Ambient and Sensory control	Ambient Control	
Sharing		Video Projection	
	Social Media	Social Media	Review Sites
			CRM
			Tracking App.

Source: Leung and Loo, 2020.

Rapidly changing and developing world witnessed one of the most important changes in the Internet. Advancements in technology caused one-way passive web model to evolve into the active model. Individuals can create their own content and interact with different contents in the environments of today's world where they can communicate two-way, share their own experiences and deliver information. Thanks to the social media that developed as a Web 2.0 technology and rapidly became a part of the daily life, consumers now can access to vast information about products and services more than ever (Eryılmaz and Zengin, 2014). This caused consumers, who now increasingly use social media and gain insights about businesses, to place the Internet and social media closer to the center of life, as

well as businesses to conduct marketing activities on social media (Kardeş Çolakoğlu and Ulema, 2021) The concept that is described as social media comprises blogs, discussion boards, moblogs (especially twitter or websites hosting sound, image, movies and pictures specially designed for PDAs and smartphones) and social network websites (instagram, facebook) (Mangold and Faulds, 2009).

Logos and visual identity elements help businesses create an image in the mind of consumers and also achieve a successful brand positioning. Many restaurant businesses use the social media to communicate efficiently with their current and potential customers. They send short text messages and e-mails to the customers registered in their databases in order to inform them about discounts and also to create customer loyalty clubs. Today, businesses make every effort in order to reach new customers and to keep the existing ones by reminding their products through social media and commercials. A well-designed web page allows restaurant businesses to create a new brand and bring new customers (Abimbola and Vallaster, 2007; Cankül, 2019; Gagic, 2016; Huang et al., 2011; Lee et al., 2016).

Using the information systems in today's world, which advances in terms of technology each day, is no longer an option for the businesses but a must. As a consequence of widespread use of the Internet, the desktop applications that were used by businesses left the stage to web applications. Those businesses which migrated their systems to the mobile devices have become easily accessible and more efficient in terms of delivering services thanks to such widespread use of smart phones. Cafes and restaurants, which are among these businesses, use a set of software in their management process. The devices that are called as hand-held terminals can process and transmit customers' orders to certain units (restaurant manager, kitchen, etc). However, needs are on the rise and customers expect more from the businesses. Considering the smart phone penetration rate from this point of view, the potential benefits that specially designed industry-specific new mobile applications can offer both to the customers and businesses are crystal clear (İnan and Biçek, 2016).

In this first quarter of the 21st century, new machine learning models are being developed in order to meet the increased food and beverage demand and to easily solve the complexity in the industry. The use of artificial intelligence in food production and food & beverage sectors is taking the industry to a new level. At this level, benefits such as less human error, less waste, maximum benefit from the product, fast service, safe and transparent food chain, customer satisfaction and customized orders are ensured. Increasingly more and more companies begin to use artificial intelligence based technological products in order to ensure customer satisfaction and increase profitability, which gives rise to predicting that this technology will be used more in food industry in the coming years ahead. According to the Global Artificial Intelligence (AI) in Food & Beverages Market Growth, Trends, and Forecasts 2019-2024 report, the use of artificial intelligence in food and beverages is expected to grow more than 65,3% annually between the 2019-2024 forecast period (Çerkez and Kızıldemir, 2020).

In respect to recent history of technology, Internet significantly accelerated the progress of technology especially in the last quarter of 20th century, which in short periods introduced disruptive and groundbreaking new technologies to the industries. Below are some trend concepts of our day related to digital marketing and business growth activities (Şengül, 2021).

IoT-Internet of Things: IoT refers to the network of physical objects that are connected to each other or to bigger systems in order to interoperate over the internet infrastructure of the objects. Wearable technology and smart environment are popular subtopics of IoT. In this respect, the Internet of Things adds a totally different dimension to the smart kitchens in restaurant industry. Current studies on smart kitchens aim to be able to control kitchens and kitchen appliances by either close or remote connection, to intervene unexpected situations in the kitchen and to improve comfort by adding various systems to the smart systems (Küçük and Ekren, 2020).

Sharing Economy: The sharing economy is an economic exchange model built around sharing idle personal resources and assets with the others through web platforms in return for a price. Airbnb and Uber platforms are outstanding examples of the sharing economy. In food and beverage industry, the Oreka platform that aims to prevent wasting food can be shown as an example of the sharing economy. Oreka is described as a market place where consumers can buy surplus products of restaurants, bakeries, cafes and groceries at a 50% or more discount. By this way, retailers can generate extra sales and reach a larger group of consumers while consumers can buy fresh and tasty foods at great value. Achieving environmental gains by reducing food waste makes Oreka's ecosystem a win-win-win model for all stakeholders involved (<https://www.orekaapp.com/hakkimizda>). YourLocal platform is another example of such platforms.

Artificial Intelligence and Robotics: Artificial Intelligence is a term that refers to smart machines and smart computer software. It leverages learning, problem-solving and decision-making capabilities of machines. Machines that can perform one or more operations automatically at a fast and high-rate accuracy are called robots while robotics is the field of science that designs, produces and studies the functions of robots. With the advanced technology and in particular with "machine learning" and "artificial intelligence", robots have become smarter than ever. Today, they have the potential to do many human tasks. The fact that Sophia, a humanoid robot, was granted citizenship of Saudi Arabia in October 2017, which is the world's first citizenship given to a robot, is an astounding event that shows how high the robot technologies gone.

Automation projects gained an unexpected momentum because during the pandemic fingers were pointed at technologies that can reduce the contact between people and make workplaces safer. For example, customers of a reopened restaurant in Maastricht, Holland are now served by three robots named Amy, Aker and James. The drinks in a bar in southern Spain are served by a robot; Alexia, 1.60 m. tall and 80 kg. with its cables, is helping the customers keep the social distance in a restaurant in Pamplona (ThinkTech, 2021). The first technological restaurant which caught eyes with its tablet tables and robot waiters was the Touch restaurant that started in 2019 but did not survive.

Financial Technology (FinTech): Although solutions such as credit or debit cards have lent a helping hand to fast service restaurants, the financial technologies introduce and integrate new payment methods into service operations. Among the new payment methods are contactless payment cards, cardless shopping and cloud-based payments (Protel, 2017). Contactless payment is a payment method using near-field communication between the payment device and point-of-sale terminal, which all happens contactless. Contactless cards' speed and ease of use in transactions make them to be used as an alternative to cash (Çevik and Teber, 2021). In cardless payments, customer credit card details are transmitted to the restaurant over a mobile device or a different online method where no physical card is used. When we consider a fast service restaurant scenario, such technological solutions which makes it possible for a customer to order and pay from a website or a mobile application without going to the restaurant and then to grab the ready-to-pick up order upon arriving at the restaurant adds a significant value. Cloud-based payment systems can be summarized as a customer entering a fast service restaurant, asking for the product from the cashier, sitting at a table and eating his or her lunch and leaving the restaurant. The payment transaction is silently completed in the background without disturbing neither the customer nor the business owner during the process. The order of customers are analyzed using receivers carefully located at key points at the restaurant and then payment is automatically deducted from the customer's account (Protel, 2017).

Augmented Reality and 3D Printers: 3D printing technology make it possible to print or produce 3 dimensional and solid objects from virtually stored 3 dimensional models of these objects (Şengül, 2021). With the help of high-quality augmented reality that is designed digitally 3 dimensional, foods

offer a unique experience to the users. Recently, food and beverage businesses focus on offering their customers tailor-made services by using the technology (Özgüneş and Bozok, 2017). In this context, it is interesting that Food Ink. is the first company in the world to serve its customers 3D printed food. Food Ink, which produces all foods, all kitchen appliances and furnitures with 3D printing technology in a fascinating futuristic area, is a unique gourmet experience. It creates an added value as a conceptual pop-up restaurant where quality cuisine meets with art, philosophy and technologies of the future. It won't be a crystal ball prediction to say that in the near future, food and beverage businesses of the future may similarly focus on using the technology, in particular AG applications, and they will have "smart plates" placed on their "smart tables" (Özgüneş and Bozok, 2017).

2.3. Sustainability

The number of environment friendly practices have been steadily rising over the last decade. Innovative restaurants are expected to grow faster since they lead the way in sustainable operations. Energy-efficient equipment, recycling programs, menus with sustainable resources and designing environment friendly restaurants are among the focal points of our day. Sustainability practices are valuable strong features for restaurants in terms of distinguishing them from the others (NRA, 2019).

According to Lorenzini (1994), the term green restaurant refers to buildings which are built or rebuilt considering environment and energy saving. The Green Restaurant Association (GRA), which was founded in America in 1990, supports green restaurants by using international and transparent certification standards based on science. GRA have been leading the green restaurant movement in food and beverage industry by using certification standards to support restaurants in terms of sustainability. GRA achieved to get many restaurants to implement environment friendly practices such as using less energy, less water, less chemicals; producing less waste and disposables, and restaurant buildings. The Sustainable Restaurant Association (SRA), which was founded in 2010, is another leading green restaurant community. This organization as well certifies restaurants using a certification program just like GRA does. Its founding purpose is to increase the food quality and to minimize food wasting and the use of resources (Tütüncü, 2020).

Recently, there have been many social responsibility movements in Turkey, which intend to raise awareness in producers and consumers about the protection of the ecological balance. Yeşil Nesil Restorancılık (YNR) is one of these movements. YNR, which was founded jointly by the Boğaziçi University and WWF-Türkiye, is a certification system that is unique to Turkey. YNR focuses on that both food and beverage businesses and consumers must have the same level of knowledge and awareness in order to ensure a responsible consumption. WWF-Türkiye and the Boğaziçi University launched a project in cooperation with TURYID and Beşiktaş Municipality and also with the support of Unilever Food Solutions. Yeşil Nesil Restaurant Movement, which began to be implemented at selected pilot restaurants in Istanbul, aims to achieve energy efficiency by transforming the final wastes while raising awareness in food and beverage industry about conscious consuming to decrease waste rate (Akar Şahingöz and Güleç, 2019).

Another important issue is about sustainable packaging. Considerations based on the packaging relative environmental impact and on the potential of suitable innovations to reduce food wastes, lead to a broader concept of sustainable packaging and should drive future strategies for sustainability improvement. Packaging reduction and a shift to alternative materials and/or technologies should be especially addressed for products characterized by a high packaging relative impact; vice versa, when packaging represents a low burden compared to other life cycle phases, the overall environmental performance will be improved with measures aimed at reducing food waste, which, in turn, could imply an affordable increase in the packaging impact (Licciardello, 2017).

3. Conclusion

In the era we live in, there are many fields that must be seriously studied paying a great attention to its existing dynamics and new versions appearing every new day. The world always witnesses newly emerging trends in the restaurant industry since it has a constantly changing and developing dynamic nature. Considering the competition conditions and in particular the customer types, it is seen that current and future trends are among the top priority subjects that restaurant businesses must focus on in order to survive. This study aims to contribute to the relevant literature by evaluating the emerging trends in the restaurant industry altogether. For this purpose, a holistic evaluation has been made under the topic of “Covid 19 pandemic, technology and sustainability”.

Digital transformation accelerated in the post-pandemic world. Although the impacts of the COVID-19 pandemic mandates adapting to new processes in the short-term it can be deemed as a huge step and even as a spring board for digital transformation. This period led to offering more flexible new solutions to the customers and employees and creating new businesses. The pandemic created such a situation that everybody was led to a rapid digital transformation. This means that businesses will have to increase their technology investments and train its employees or employ new ones. The COVID-19 is forcing businesses in many industries to do the same job with less employees. The fact that robots and business algorithms were not affected from the pandemic shows how important automation is. Businesses that accelerated digital transformation are expected to accelerate automation as well during the pandemic period. Facilitating the tasks with the help of delivery drones, robotic production tools and artificial intelligence seems to accelerate gradually (ThinkTech, 2020). In this respect, Industry 4.0 revolutionizes production, innovation and distribution methods of businesses. Producers are integrating enabler technologies such as Internet of Things (IoT), cloud computing and analytics, artificial intelligence (AI) and machine learning into the production facilities and operations (IBM, t.y.).

With the use of smart technologies in restaurant industry, the overall operations and productivity of restaurants increase and error probability from the moment of booking to final bill payment decreases. Smart technology systems and devices, allow restaurants to achieve higher accuracy and service reliability, which directly affect customer and employee satisfaction. Decreasing the frequency of wrong orders or wrong billings will most likely lead to less customer complaints and less revenue loss. Knowledge, skills and capabilities related to smart technologies are essential in terms of ensuring sustaining smart service dining experiences. In conclusion, governments should take the leading role to promote the restaurant industry to adapt smart technologies and offer smart services. In this context, governments should design the smart network infrastructure, standardize the communication platform and protocol, and invite technology operators to create orientation teams that will initiate the ideas in order to optimize the results (Leung and Loo, 2020).

In restaurant industry, shifting to a new model that focuses on creating interdisciplinary skills and improving problem solving skills as well as overcoming challenges of the 4.0 technologies is strategically important (Ansari, Erol and Sihni, 2018). In terms of human-machine interactions, such technologies require employees to process vast amount of data, to manage a great number of job-related activities simultaneously, to solve complex and multidisciplinary problems and to work in collaboration with the robots and engage in high technologies. However, especially small and medium size companies lack these skills. For this reason, utilization of virtual trainings, creating organizational processes that focus on user’s feedback, improving technical (high skills), behavioral (social skills) and digital skills of employees, integrating customizable human-centric production models into the process are strategic success indicators (Furstenau, et al., 2020). At this point, joint projects integrated with both sectoral and public regulations should be developed. It necessary to update and improve the current educational systems in the light of current and future trends in order to provide the industry with qualified staff.

Whether it is to fight against water waste or to achieve energy and water efficiency or to offer more; what is important is to offer guests sustainable options and to raise a holistic awareness about this. In their innovation efforts, restaurant businesses must be seriously looking for how to minimize the impacts of the related processes on the environment. Restaurant customers now raise more concerns about sustainable practices. Restaurant businesses may face challenges in the implementation of environmental practices such as recycling, composting and food donation, including poor infrastructure. Yet, the industry keeps adapting and leading the change. As a sign of the upward trend, restaurant businesses that signify they are “green certified” captures value.

Services are exposed to the effects of many variables due to their unique features. The 21st century includes a period in which a precise and clear definition of the service buyer cannot be made. Social, economic and technological developments in the world lead to innovations and changes in many areas, especially in the food and beverage industry, in the service production process, management systems, technical systems and social systems. One of the most fundamental elements of an organization is its professional adaptability to change.

The food and beverage market is in a state of constant change. Demographic evolution, postmodern consumer needs, global economic crises and extraordinary events are the main factors of these changes. Due to the intangible nature of these market changes, many businesses miss the chance to gain and/or retain competitive advantage. Businesses that create and offer new and better business ideas and add value to the products and services they offer can obtain the best business opportunities by noticing the changes and crises experienced as quickly as possible (Ivkov et al., 2016).

The restaurant industry, which is one of the bearer of the complex and labor-intensive market in the service sector, is in a struggle to survive with its current and future trends. In terms of keeping safe from rigor mortis in the relevant market, the attempts of businesses to adapt continuously changing and developing trends to their operations is an unavoidable strategical must for both businesses and customers.

Although this study offers valuable insights about the contemporary trends in the restaurant industry, it has an important limitation as it includes a conceptual evaluation of trends. For future works, a study based on field research can be recommended in order to reveal implementation status of trends in the food and beverage sector. Focusing on current and future trends, following an approach that will detail the general perspective obtained by this study can provide in-depth information.

References

- Abimbola, T. and Vallaster, C. (2007). Brand, organisational identity and reputation in SMEs: an overview. *Qualitative Market Research: An International Journal*, 10(4), 341-348. <https://doi.org/10.1108/13522750710819685>.
- Akar Şahingöz, S. and Güleç, E. (2019). Green generation restaurant movement in restaurants: An example of “La Mancha Restaurant”. *Journal of Tourism Theory and Research*, 5(2), 292-300.
- Ansari, F., Erol, S. and Sihni, W. (2018). Rethinking human-machine learning in industry 4.0: How does the paradigm shift treat the role of human learning? *Procedia Manuf.*, 23, 117–122. <https://doi.org/10.1016/j.promfg.2018.04.003>.
- Bozic, A. and Milosevic, S. (2021). Contemporary trends in the restaurant industry and gastronomy. *Journal of Hospitality & Tourism Research*, 45(5), 905-907. <https://doi.org/10.1177/10963480211020559>.
- Bradford, T. (2005). *Contactless: The Next Payment Wave?*. Federal Reserve Bank of Kansas City, Payments System Research Briefing.
- Can, U. (2021). New rules of the new normal and new customer. Can, U. and Okat, C. (Eds.), In: *Customer Management in Food and Beverage Services*. Ankara: Detay Publishing, pp. 189-200.
- Cankül, D. (2019). Innovation practices in businesses: the case of restaurants. *Gastroia: Journal of Gastronomy and Travel Research*, 3(2), 225-240.

- Çerkez, M. and Kızıldemir, Ö. (2020). Use of artificial intelligence in food and beverage business. *Journal of Turkish Tourism Research*, 4(2), 1264-1278. DOI: 10.26677/TR1010.2020.394.
- Çevik, S. and Teber, D. (2021). Development of contactless card payments in Turkey. *Journal of BRSA Banking and Financial Markets*, 15(2): 203-226. DOI: <http://dx.doi.org/10.46520/bddkdergisi.987427>.
- Elkins, M. (2018). Starting takeout at your restaurant. <https://www.waiterio.com/blog/tr/restoraninizda-bir-teslim-servisi-baslatma/> (30.09.2021).
- Erdemir, M.B. and Özoğlu, B. (2021). The Effect of social media on consumer behavior: Kayseri province example. *Third Sector Social Economic Review*, 56(2), 1078-1103. doi: 10.15659/3.sektor-sosyal-ekonomi.21.05.1583.
- Eryılmaz, B. and Zengin, B. (2014). A Research on the boutique hotels' social media use: facebook sample. *Kastamonu University Journal of Economics and Administrative Sciences Faculty*, 4(2), 42-59.
- Furstenau L. B., Sott M. K., Kipper L. M., Machado E. L., Lopez-Robles J. R., Dohan M. S., Cobo, M.J., Zahid, A., Abbasi, Q.H., and Imran, M.A. (2020). Link between sustainability and industry 4.0: trends, challenges and new perspectives. *IEEE Access* 8, 140079–140096. <https://doi.org/10.1109/ACCESS.2020.3012812>.
- Gagić, S. (2016). Restaurant innovativeness: a case study of Vojvodina. *The European Journal of Applied Economics*, 13(2), 57-69. DOI: 10.5937/ejae13-10503.
- Huang, Y., Hui, S., Inman, J. J. and Suher, J. (2011). The effect of in-store travel distance on unplanned purchase with applications to store layout and mobile shopping apps. *Advances in Consumer Research*, 136-137. DOI:10.1509/jm.11.0436.
- IBM (t.y.). What is Industry 4.0?. <https://www.ibm.com/topics/industry-4-0> (12.10.2021).
- Ivkov, M., Blesic, I., Simat, K., Demirovic, D., Bozic, S. and Stefanovic, V. (2016). Innovations in the restaurant industry-an exploratory study. *Economics of Agriculture*, 63(4), 1169-1186.
- İnan, M. and Biçek, E. (2016). *Mobile Approach to Restaurant Management Processes: An Android Application*. XVIII. Academic Informatics Conference, Aydın.
- Kardeş Çolakoğlu, N., and Ulema, Ş. (2021). How do the best ones use social media: example of Instagram? *Journal of Turkish Tourism Research*, 5(2), 877-891.
- Khamidovich, Z.K. (2021). Pandemic and trends in the restaurant business in 2021. *Central Asian Studies*, 2(6), 54-61.
- Kurtz, J. (2020). Top foodservice trends of 2021. <https://www.webstaurantstore.com/blog/2214/top-foodservice-trends.html> (26.09.2021).
- Küçük, Z. K. and Ekren, N. (2020). A Review on systems designed for the smart kitchen. *International Periodical of Recent Technologies in Applied Engineering*, 2(1), 25-34. DOI: 10.35333/porta.2020.210.
- Lee, C., Sardeshmukh, S. R. and Hallak, R. (2016). A Qualitative study of innovation in the restaurant industry. *An International Journal of Tourism and Hospitality Research*, 1-10. <https://doi.org/10.1080/13032917.2016.1191769>.
- Leung, R. and Loo, P.T. (2020): Co-creating interactive dining experiences via interconnected and interoperable smart technology, *Asian Journal of Technology Innovation*, DOI: 10.1080/19761597.2020.1822748.
- Licciardello, F. (2017). Packaging, blessing in disguise. review on its diverse contribution to food sustainability. *Trends in Food Science & Technology*, 65, 32–39. DOI10.1016/j.tifs.2017.05.003.
- Mangold, W.G. and Faulds, D.J. (2009). Social media: the new hybrid element of the promotion mix. *Journal of Business Horizons*, 52, 357-365. <http://dx.doi.org/10.1016/j.bushor.2009.03.002>
- NRA (National Restaurant Association) (2019). Restaurant industry 2030. <https://restaurant.org/research/reports/restaurant-industry-2030> (01.09.2021).
- Norris, C. L., Taylor, S., Jr. and Taylor, D. C. (2021). (in press). Pivot! How the restaurant industry adapted during COVID-19 restrictions. *International Hospitality Review*, ahead-of-print. Advance online publication. <https://doi.org/10.1108/IHR-09-2020-0052>.
- Özgüneş, R. E. and Bozok, D. (2017). (Is?) Virtual opponent of tourism sector: augmented reality. *International Journal of Turkic World Tourism Studies*, 2(2), 146-160.
- Paket Mutfak (2020). *Ghost Kitchen*. <https://www.paketmutfak.com.tr/blog> (10.10.2021). Preston-Whyte, R. (1999). Restaurant trends in Durban, South Africa. *Tourism Geographies*, 1:4, 443-459.

- Protel (2017). *How Developments in Payment Systems Will Affect Quick Service Restaurants*. <https://www.protel.com.tr/blog/oedeme-sistemlerindeki-teknolojik-gelismeler-hizli-servis-restoranlarini-nasil-etkileyecek/> (15.10.2021).
- Sarıışık, M., Çavuş, Ş. and Karamustafa, K., (2019). *Professional Restaurant Management: Principles, Practices and Case Studies*. Ankara: Detay Publishing.
- Severson, K. and Yaffe-Bellany, D. (2020). *Independent Restaurants Brace for the Unknown*. *The New York Times*. <https://www.nytimes.com/2020/03/20/dining/local-restaurants-coronavirus.html>. (20.12.2020).
- Sigala, M. (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. *Journal of Business Research*, 117: 312-321. doi: 10.1016/j.jbusres.2020.06.015.
- SproutQR (2021). Are QR codes dead? QR code statistics say no. <https://www.sproutqr.com/blog/qr-codes-dead>. (10.10.2021).
- Şengül, O. (2021). *Digital Marketing*. İstanbul: Ceres Publishing.
- ThinkTech (2021). Robots Today and in the Near Future. https://thinktech.stm.com.tr/uploads/docs/1619621283_stm-outlook-robotlar.pdf (20.10.2021).
- ThinkTech (2020). *The Future of Working Life After Covid 19*. <https://thinktech.stm.com.tr/tr/covid-19-sonrasi-calisma-hayatinin-gelecegi> (20.10.2021).
- Tütüncü, Ş. (2020). *The Green Restaurant Movement in the Scope of Sustainability*. <https://www.soylentidergi.com/surdurulebilirlik-kapsaminda-yesil-restoran-hareketi/> (20.10.2021).
- Yeşilyurt, B. and Kurnaz, A. (2021). A New application in the restaurant industry in the covid 19 pandemia process: cloud kitchens. *Journal of Tourism and Research*, 10(2), 47-62.



© 2020 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).