



TO STUDY GROWTH AND SUSTAINABILITY OF RESTAURANT INDUSTRY IN DIGITAL WORLD

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Abstract:

As a result of digitalization, the global restaurant industry has transformed over the past decades. Embracing technological advancements has allowed many restaurants to enhance efficiency and meet consumer demands in an increasingly digital age. Digitalization in restaurants can be seen in both physical spaces and the online world. One of the ways that embracing technology has helped restaurants' physical spaces run more efficiently is by using self-ordering kiosks, which can gather useful customer data, reduce labor costs, and lower the amount of incorrect orders. In 2020, the global interactive kiosk market value reached 26.63 billion US dollars, a figure that was predicted to grow in the future. This feature of restaurant services became especially important during the coronavirus (COVID – 19) pandemic due to health and hygiene concerns making personal interaction between restaurant workers and customers less possible. The same can be said for the use of contactless payments. The industry has seen the rise of digital technologies. This paper presents an overview on current developments in the restaurant industry and based on an analysis of current digital services, it derives some implications for future directions. Among the observations are that restaurants need to cover more touch points, provide more individualized offerings and strive for more automation as well as integration of their systems.

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Introduction:

In recent years, the digital transformation has fundamentally changed numerous industries. Among the examples are media (news portals, streaming services), retailing (mail ordering and online groceries), tourism (online travel agencies, sharing platforms), and banking (online banking, smart payment.) Similar changes may be observed in the hospitality sector, a part of the larger tourism

industry that comprises the restaurant industry. This broader conceptualization includes the production and trading of food where wholesalers are also driving digital initiatives for restaurants. For example, Zomato platform connects restaurants more interactively with their customers by providing digital reservations, online menus, or digital shift schedules. The world is changing every



second and businesses need to adapt to a new era of customers – the ones who find something good and the next second, they own it. From the smart refrigerator in the kitchen to the invoice machine at the dashboard, restaurants are also greatly impacted by technological changes. Here's a list of five technologies that are changing the restaurant industry completely:

Objectives:

1. To understand the change in the restaurant industry over recent years
2. To learn about the innovation with digital services in the restaurant industry
3. To understand the kind of technologies that have contributed to the change in the restaurant industry

Changing Restaurant Industry: Over the past years, this field has seen the rise of digital innovations, increased competition and, most recently, it has experienced the decisive event of the Corona pandemic. Due to lockdowns and other prevention measures, restaurants worldwide have had to encounter considerable losses in sales.

Without being able to prepare adequately, low contact services such as ordering, pick-up and delivery, have become their primary sources of revenue. However, it may be expected that the future world for restaurants will not resemble the situation before the pandemic. An important reason is the strong efforts in digitalization, where restaurants not only invested in digital resources, such as point-of-sale (PoS) devices, online ordering systems or e-commerce platforms, but also conceived new processes for pick-up or delivery as well as for low-contact interaction with their customers. In view of the widespread use of videoconferencing, e-commerce or other digital

tools during the pandemic, customers are more ready than before to use digital means when visiting restaurants and competition has increased with many novel offerings, such as remote ordering or personalization to enhance customer experience. The potential of this change has been recognized before the pandemic and is visible in growing investments in start-up businesses in India. Among the examples are Swiggy, a leading Indian online restaurant marketplace that received a \$600 million funding, now often referred to as “foodtech” to denote “the online food ordering and delivery ecosystem”.

What Is Restaurant Technology?

If we talk about Restaurant Technology in a layman's words, then it can be portrayed as a dedicated tech that helps commercial kitchens become more sustainable while saving time, labor and money.

In the past, the process of managing a restaurant involved using notebooks and a calendar with each data written by hands. This means you needed to provide human efforts to capture order data, sort transactions, and report about performance. The present day structure however belongs to cloud computation and automation.

The culture of cloud computing and automation has been receiving constant attention for a while. Across a variety of industries, the adoption of automation and cloud-based software has been increased dramatically, and the restaurant business is no exception. Cloud-based restaurant POS systems have become increasingly popular as they are easy to install, remotely workable and one time investment for long.

Restaurant technology relies on a network of computers or remote servers that are hosted on the



world wide web to manage, store, and process data. It's not only convenient but secure and tamper-proof too.

1. Self-Ordering Tablets:

After such long anticipation, the truly server-less restaurant experience is finally here. The self-ordering tablets have proved that there's no place for human servers in a technologically-modern restaurant. Brands like McDonalds and Panera Bread have integrated self-ordering kiosks in many of their well-known locations.

This AI – based restaurant focused technology allows consumers to browse the food menu and choose their favorite dish without involving any employee.

2. Contactless Payments:

As the pandemic invaded the world, the availability of contactless payment became an indispensable part of the dining experience. According to a survey, 34% of guests believe that mobile payment options are a crucial part of their dining experience.

With this technology, you can help your guests remain secure and safe by paying through the dip, tap, or swipe. This entirely eliminates the need for physical contact between staff and guests, especially at these unprecedented times.

3. Bluetooth Temperature Sensors:

If you're a restaurant owner, you already know that following food safety guidelines by HACCP is a task in itself. To make sure they abide by all rules, a lot of restaurants are using Bluetooth temperature sensing to preserve a par level quality of their equipment and food. Restaurants have the ability to measure the temperature of their important assets, either manually or automatically, with the help of fixed probes and sensors.

4. Reordering With Facial Recognition:

There are a few restaurants that are conducting facial recognition trial experiments that'll allow consumers to reorder previous meals at self-service kiosks with the help of facial recognition. The trial was specifically conducted on restaurants that offer a menu with numerous optional customization layers. With such a great variety of choices, the simple way to reorder encourages the customer to think about coming back.

This technology can also be integrated with facial recognition to help establish loyalty and make business-customer relationships lasting by providing customers a way to reorder their favorite meals quickly.

5. Handheld Entertainment:

The tablets in restaurants are more than just a way to make quick orders and pay. There are numerous companies like Buzz Time that provide tablets with entertaining trivia and games to restaurants. It also allows consumers to join nationally conducted competitions 15 hours a day and seven days a week. These tablets can also be used to organize a live poker or trivia tournament in the restaurant. With this technology, restaurants can attract a plethora of customers at their place.

Like every other industry, the impact of technology on the restaurant industry is more than a tool for restaurants. Using technology in restaurants or the way you harness this tool will determine whether it works for your benefit or loss. As of now, everything seems to be on the positive side of the track.

Innovation with digital services: During the past ten years, the digital transformation gained momentum with the convergence of several technological developments. This not only



comprised the bundling of network technologies, but in particular the confluence of social, mobile, analytics and cloud computing. In addition, the more recent coming together of distributed ledger technologies (DLT), including blockchain technologies), artificial intelligence (AI), extended reality (XR) and quantum computing (QC) was captured.

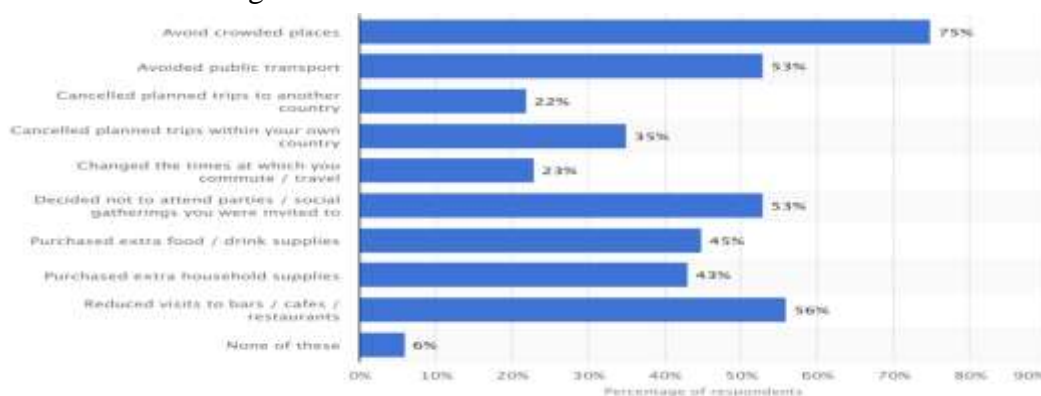
In the present case, restaurant owners are relieved from purchasing and administrating an own system infrastructure. Instead they only need a network connection and the appropriate client hardware, which is often universal in nature (i.e. standard tablets and handhelds instead of proprietary cash registers).

Being connected allows customers to digitally interact with the restaurant regardless of whether

they are at the restaurant's premises or not and to determine which channel they prefer to access the restaurant's services (e.g. online/on-site ordering, self-service/assisted ordering).

The Food Industry's Main Problem: The transformation of the restaurant and food industry in the digital world is undeniable because customer preferences have changed.

This article will benefit the restaurant and food industry business owners trying to adapt to the COVID-19 post-pandemic era. According to Statista.com, 56% of customers reduce their visits to restaurants, bars, and cafes. More than that, 75% of people worldwide avoid crowded places. It means that the restaurants & food industry are losing more than 50% of their revenue.



Customers' Needs Have Changed: People are suffering from missing online vital features, which hurts the company's reputation, scalability & income. Customers are willing to get food ordered online, directly from the website & get the food picked up or delivered by their door.

From paper calendars and notebooks to custom-code digital processes and software platforms, the food industry has witnessed numerous technological transformations. The way restaurant businesses operate and run, has become drastically streamlined and automated.

If you're a restaurant manager or owner not being able to focus on important aspects of your business, signs are that you've not been exposed to innovative restaurant technology that allows you to achieve operational efficiency.

However, don't confuse this revolutionary progress with updated ovens and economical dishwashers (not even a coffee machine!). The latest use of technology in restaurant industry makes the food business omnichannel and more digital.

As a general rule of thumb, thinking of a restaurant as just a business about eating is straight out dumb.



Here's a quick list of stats that indicate the importance of technology in restaurants or the food industry:

- 63% of consumers believe that online ordering is more convenient in comparison to dining out with their family.
- More than 80% of restaurants are adopting technology in their operations – like reservations, online ordering, and restaurant analytics.
- 68% of consumers admitted that the use of server tablets in restaurants improved their dining experience gradually.

The stats are not about a brand-new refrigerator or dishwasher. Apart from the clean plates and tidiness, the customer barely notices any changes in a restaurant (at least on a conscious level). Before you learn how emerging restaurant technology is shaping the industry, you need to know what it is in general.

Innovation in Food Industry: It turns out that the technology trends in restaurant industry was silent progress that came into existence after consumers changed their behavior because of economic and social factors. Now, it's more of an experience-based model than a hospitality business. Future of restaurant technology trends can be seen in the restaurant industry that is using robots in their setup to take orders from customers and serve them. People are making use of restaurant mobile app development services to build apps that provide innovation strategies in restaurant business.

Implications and Conclusion: In summary, this analysis of existing digital services has shown that

digital transformation has reached the restaurant industry. Despite it was based on an initial web-based survey and requires more in-depth and empirical future research, several implications may be derived. First, it should be recognized that contrary to the classical PoS systems, digital services are an option for larger and smaller restaurants alike. In particular, this broadens the digital options for smaller businesses. Second, the digital services comprise numerous offerings that support many functions in a restaurant.

Customer journeys will be hybrid and start earlier with pre-visit services, which call for an alignment with services during and after the restaurant visit. Ordering and payment is more often decoupled from the physical visit in the restaurant

As with every change, the digital transformation of the restaurant industry offers risks and opportunities. Not every innovation will be successful, which is also true for restaurants. Investments should be carefully considered since new devices involve costs and might disturb processes in case of non- or malfunctioning.

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Cite This Article:

Pillai G. & Pillai U., (2023). To Study Growth and Sustainability of Restaurant Industry in Digital World, Electronic International Interdisciplinary Research Journal, XII, Issue – I(b), Jan-Feb, 131-135

