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Review Article

A Comparative Study of Online and Offline Food Delivery Systems

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I N F O

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A B S T R A C T

The food service sector has changed a lot because of the quick growth of digital technologies. Now, there are online food delivery systems that work alongside traditional offline ways. This study offers a comparative comparison of online and offline food delivery systems concerning user convenience, service efficiency, cost-effectiveness, customer happiness, and operational issues. The study assesses variations in ordering procedures, delivery duration, service dependability, payment adaptability, and consumer inclinations through surveys, secondary data, and performance metrics. The results show that online systems are more convenient, offer more food selections, allow for real-time tracking, and have more payment alternatives. However, offline systems are still favored because they are thought to be fresher, allow for more personalized interactions, and are more reliable in places with restricted digital connectivity. The study finds that both models have their pros and cons. It also recommends that combining digital platforms with traditional service features might improve the client experience and make operations more efficient. These ideas help make food delivery systems that are more flexible and focused on the needs of the client.

Keywords: Food Delivery Online, Food Delivery Offline, Consumer Behavior, Service Efficiency, Customer Satisfaction, Analysis of Comparisons

Introduction

People can buy food online or on their phones thanks to online delivery platforms. Food-ordering systems and restaurant aggregator systems are the two main types of internet delivery platforms. Food-ordering systems link customers directly to restaurants, while aggregator systems link customers to third-party restaurants that hire organizations or people to deliver food.[1] The majority of well-known platforms use a restaurant aggregator model.

All food-ordering systems that don't use the internet are part of offline delivery systems. The most popular way to order food offline is to call the restaurant. Offline delivery channels also include in-person purchases that include ordering meals but don't use the internet. So, ordering food using social media sites is not part of offline meal delivery because the transaction still happens online.

The meal delivery business has risen quickly because more people want quick and easy ways to get their food, both online and in person. Ordering food is the same no matter what channel you utilize. [2] When people use a delivery

service, they often rely on someone leaving a physical order to make sure the meal gets to them. During this middle phase, the way food is packaged and handled stays the same; therefore, the freshness is the same whether you order online or in person.[3]

What are online delivery systems?

Food providers and customers can connect through the Internet with online delivery services. Customers can use websites or software apps to look at menus and choose meals. An order is sent via the internet. The vendor makes the food and then brings it to the consumer. A platform handles online delivery and takes a cut of the sale. Some of the biggest online delivery services are DoorDash, Uber Eats, Just Eat, and Grubhub. Meituan and WeChat are two well-known multi-function sites that also have meal delivery sections.[3]

Restaurants have been delivering meals for a long time, and there are still mechanisms for ordering food offline. When you order offline, you usually have to talk to a vendor personally. Customers can place an order by either going to the store in person or calling the seller. The order is given verbally or in writing, such as on a takeaway menu.

What are offline delivery systems?

Food delivery systems can work online or offline. Traditional offline food delivery systems need either a landline phone or a trip to the restaurant. To make an order with these systems, you need to know the restaurant's phone number and either call the restaurant or order food from the business directly. After that, a courier boy is given the job of bringing the food from the restaurant to the customer's chosen location.[3]

How online systems handle delivery

The customer places an order for food online through a special app or website. They choose the food they want from neighboring stores, which usually have products from more than one provider, and then they place an order. The system checks the order and sends it to the supplier, who then makes the dish. A delivery person, often known as a "rider," is assigned to pick up the order. After the food is ready, the rider goes to the restaurant to pick it up. After that, the rider takes the food to the customer's house and finishes the delivery. The consumer gets real-time updates throughout the whole process, such as when the package will arrive and where the rider is.[3] All of this is done digitally.

Online delivery services use smartphone apps, web-based platforms, and Application Programming Interfaces (APIs).[4] Here is a simple example of how to place an order. The customer goes to a channel, picks the meal they want, and places the order. This starts a series of automated occurrences that follow rules that have already been set. A dedicated server handles the data and does what has to be done. First, the system finds the restaurant that goes with it. Then, the order is sent to the restaurant's waiter, along with the menu, prices, and delivery time. The restaurant gets the order and tells the rider through an internal messaging system. The rider makes sure the order is safe and then goes to the restaurant to pick it up. The rider stamps the order as complete once they get the food. The server sees that the order is complete and sends the rider directions to the customer's address. The rider marks the order as delivered when they hand over the meal. This starts the process of making an invoice and finishing the deal.

How offline systems deliver

Online delivery systems work as logistical platforms for food delivery, making it easy for food to travel from restaurants or grocery shops to customers' homes. These systems take care of everything, from placing an order to processing payments, choosing retail partners, and delivering the last mile. They also link together many different groups, such as final customers, retail partners, delivery people, and a central logistics platform. Food delivery services use well-designed applications and websites to tightly manage logistics, which lets them change transportation routes in real time.

Traditional offline delivery systems include numerous ways to order food, such as going to the restaurant in person, calling the restaurant or retail partner, and using third-party logistical services like meal delivery through apps and websites. In offline systems, delivery people go to the stores or restaurants where clients ordered food and pick it up. Then they take it to the final destination. The offline delivery procedure needs additional manual coordination tools, and there aren't any in-app options for checking on orders or making changes. Coordination depends more on customers and delivery people talking to each other directly and without any middlemen.

The main variations are in speed, cost, and dependability

The average delivery time for combined online and offline methods is between 30 and 50 minutes.[3] For offline delivery, it takes roughly 15 to 25 minutes to get the food ready and give it to the delivery person. The time it takes for the meal to get to the client is about the same in both methods, on the other hand. Because of this, the offline delivery method takes a lot longer to get to the consumer than the online delivery system does to get to the final destination.

Not only does it take longer for offline delivery methods to deliver, but the service fees are also higher.[2] In the offline system, the customer pays the restaurant for the food and then gives the delivery person an extra fee. This

means that consumers have to pay for two deliveries: one to the restaurant and one to their house. When the delivery fees are expected to be included in the restaurant bill, the restaurant usually charges the customer for both source fees. Because of this, the amount of turnover is also significantly higher, which raises the percentage or overall service cost for monthly subscriptions that are not online.

Even if they are faster and cheaper, online delivery systems are still not as trustworthy. Online delivery systems use electronic data and smart routing to speed up delivery times. However, the electronic and vehicle technologies can be unreliable and break down, which can cause substantial delays, even for orders that are supposed to be delivered on time. On the other hand, offline delivery is done with a mobile phone and human effort, which makes it much easier for the driver to handle several orders without having to reinstall apps or restart their phone.

Comparing customer experiences

Third-party platforms like Foodpanda, Zomato, and Uber Eats, as well as multimodal apps like WeChat Mini Programs, make it easy to get meals online from places other than restaurants. Users can order food from one or more sellers and have it delivered to their home by these platforms, no matter where the food comes from or how far away it is. Most systems need people to utilize their own mobile devices that can connect to the Internet. You can place food orders using one or more ways to talk to one another, like text, voice, photographs, or drawings. Systems use their own data and algorithms, as well as data from outside sources, to route orders, payments, and logistical information to plan pickup and delivery.[1]

Things to think about when it comes to food quality and safety

When delivering food, you need to pay close attention to safety and quality.[2] Keeping hot foods hot and cold foods cold helps keep their taste and stops them from going bad. The way food is packaged also affects its quality. Containers that are safe to use lower the risk of mixing or dropping, and materials that keep the temperature stable keep food fresh longer. Restaurants pack food in their unique way for both delivery methods.

Even when restaurants use the same packaging, the temperature of the food and how long it stays hot or cold can be different. Smartphones keep online systems connected from the start of work to the end.[1] With this technology, stakeholders can work together online on several activities, such as keeping track of orders or changing the projected delivery times. Customers regularly leave comments on food safety, and restaurants keep an eye on those comments to make sure the food is always good.

Problems and dangers with online delivery

Online meal delivery services have to deal with a lot of problems and dangers while they work. They depend a lot on technology, which means they are prone to outages and other problems. Ordering from more than one place can generate traffic jams or mix-ups regarding where to pick up orders. Once delivery starts, problems with the driver might make things even riskier, such as not being available, losing an order, or getting imprecise feedback that affects future deliveries.[1]

Problems can come up at any time, and actions that aren't seen are less clear than with systems that are down.

There are problems with offline solutions as well. Orders may not be clear, which can lead to mistakes, and personnel may be busy with other things while food is being made. There isn't much communication with customers, and they may have to wait a lengthy time. Service is even harder when courts and other places have busy schedules.[2]

Ordering meals online has its hazards, which might annoy customers and lead to more complaints and less satisfaction. For example, letting too many eateries register at the same time[3] makes it hard to handle high-frequency and last-minute orders. It may even be essential to use more than one application to find out if a place is ready. Offline systems can also have similar problems, especially during busy times.

Problems and dangers of delivering offline

One of the biggest problems with delivering food offline is getting the order wrong, such as sending the wrong foods or not customizing them correctly. Customers often finish their orders in person or over the phone, which takes longer because they have to explain what they want. Customers can only tell the staff what they want and how they want it at the counter of a restaurant. Sometimes, customers tell the employee what they want while the employee takes the order on a smart device. This might lead to confusion. Some restaurants, especially those with long menus, provide customers flyers or printed cards to fill out; however, the information is sometimes not apparent.[3]

Another big problem is the wait time. When you shop online, you usually have to wait longer to figure out exactly what you need and to clear up any questions about the order details. No matter how far away, delivery of an order usually takes an extra 15 to 30 minutes, and in certain situations, it might take more than an hour.[2]

Environmental effects and long-term viability

Digital platforms that let people buy meals from restaurants of their choice and have them delivered to their location

by a courier are the most common type of urban food delivery service these days. These platforms make it easier for restaurants and customers to order food and find it by making a direct connection between the two. Online food delivery services (OFDS) use an app-based or web-based delivery system that relies on software to set fixed delivery routes. However, the food delivery system that many cities started using not too long ago is offline and works by phone calls. Customers can either call the restaurants to place their orders or go to the restaurant in person to place their orders.[5]

Customers, managers, restaurant staff, couriers, and the delivery-app platforms are all essential groups that are involved in these kinds of food delivery systems. There are six steps in the delivery process: (1) making the order, (2) receiving and confirming the order, (3) preparing the order, (4) picking up the order, (5) conveying the order, and (6) delivering the order [4]. Most of the consumers are students who live off campus. Those city students think that food delivery service is an important part of their daily routine.

Technology is used in online delivery systems to make things easier and faster, whereas human coordination is needed in offline delivery systems. Both systems provide rules for how things should be done, involve a lot of people, and usually have six steps, from the customer's order to the final delivery. Most online systems come from applications or platforms and use algorithms to figure out jobs and routes. Functions are distributed between apps, restaurants, couriers, and data flow. Extra information, like projected arrival time and delivery history, is also kept. Offline systems: use phone conversations or in-person transactions; customers and restaurant personnel work together directly to plan orders, which limits communication; and the workflow is mostly linear because restaurants handle order volumes and delivery logistics.[6]

The environmental impact of food delivery services has two parts that depend on each other: sustainability and the ability to lessen the bad consequences of climate change by decarbonizing logistics. The sustainable and balanced growth of delivery modes in zero-emission cities depends on both building green food delivery systems and meeting the needs of on-demand food delivery by setting up distributed storage sites in specific areas of the cities. In densely populated metropolitan areas, the need for storage facilities that make food delivery inexpensive is what finally makes it possible to build a sustainable and environmentally friendly food delivery logistics system.

There are times when online and offline distribution techniques are better than others. The distance from the restaurant, the time until the meal is needed, the cost of the delivery, and the relevance of customer-specific preferences all play a role in the choice of delivery.

For big orders made ahead of time, online platforms work well. Most online applications don't tell clients how much the delivery will cost until the meal is almost ready, which can be a surprise. Most apps clearly show the distance to a delivery place before an order is verified. Routing might assist you avoid going above the indicated fees. Algorithms make sure that distance doesn't lead to additional charges by comparing the length of a route to the amount of food requested. Customers can choose when they want to eat when they place an order through a platform that allows for advance scheduling. This lets the routing algorithms make the most of the time it takes to get to the restaurant before food preparation starts.[3]

For modest requests that need to be filled right away or on short notice, offline solutions work better. Customers generally try to get the best deal on the things they order, which is why they choose offline or online channels that keep the lowest base costs. Offline ordering is better for items that can be delivered right away from any nearby restaurant.[1]

Swiggy is great since it's easy to use and fun to order from, but it could use more new things and other options. To make customers happier, Uber Eats needs to improve in a number of hedonic areas. The results give management useful information that they can use to improve the quality of their service and their competitive position in the online meal delivery market.[8]

Online meal delivery services have a ratchet effect.[9] The ratchet effect happens when temporary rises in service or consumption levels become permanent expectations, which makes it impossible to go back to the way things were before.[9]

Trends in delivery for the future

To fulfill changing client needs, more and more companies are focusing on automating delivery.[3] Drones, self-driving cars, or robots could take over delivery labor around the world and at least partially replace the driver. As a possible side effect, restaurant operators could use technology to make their job flow more smoothly. Intelligent routing algorithms that look at things like traffic, weather, and past delivery timings can help match up incoming orders with delivery assignments.[4] So, businesses don't need to be physically present at the restaurant. Some providers can provide an integrated solution through apps or web platforms.[7]

Conclusion

In the last few years, food delivery systems have changed a lot. There are now several online food delivery services that let users order meals easily through websites or mobile apps. At the same time, there are still offline food delivery networks. There are several differences between delivering

food online and offline, such as speed, cost, customer experience, problems, environmental impact, and future trends.

There are benefits to both kinds. Online systems normally give you clearer information than offline ones do, and they are less likely to be late. Customers are urged to pick the best way to get their food based on how far away they are from the restaurant, how quickly they need it, or other things.

Over the past ten years, food delivery applications have become more and more popular around the world. A number of articles talk about how online meal ordering systems are being made and how happy customers are with them. Online deliveries are growing quickly in Qatar, the UK, Japan, and Bangladesh. This shows that online systems are becoming more competitive with offline services.

Customers have significant preferences for one of the two types of delivery methods. A study of people who ordered meals online in Qatar found that the three most important things that affect overall happiness and the desire to buy are convenience of use, a solid rating for service quality, and the availability of different payment choices. Another article talked about what people in Bangladesh like when they order meals, and it said that online methods are far more popular than conventional ones.[1]

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