

## Exploring Customer Views on Digitalized vs. Traditional Restaurants: A Study in the Restaurant Industry

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### ABSTRACT

The main objective of this study is to explore and analyze customer perceptions and views regarding digitalized restaurants compared to traditional restaurants. This study would also help the restaurant industry transform into digitalization that corresponds with customers' views. For research purposes, data collection from a sample of customers who have recently dined in both types of restaurants by conducting a questionnaire targeting at least 100 respondents was conducted. The questionnaire focused on gathering data related to customers' perspectives and satisfaction and examining the variables of efficiency and effectiveness and perceived benefits such as convenience, visuals, time consumption, customization, loyalty and rewards programs, and digital feedback. The data were analyzed using Statistical Package for the Social Sciences (SPSS). Based on the study, most customers prefer digitalized restaurants over traditional ones. The survey revealed that this type of restaurant brings more benefits and convenience to customers. The restaurant industry may need to improve its services by implementing technology that is acceptable for use in order to meet consumer expectations and demands regarding dining.

**Keywords:** Customer Perceptions and Satisfaction, Digitalized Restaurants, Efficiency and Effectiveness, Traditional Restaurants

## **INTRODUCTION**

The utilization of Information and Communication Technologies (ICTs) has significantly impacted the management and competitive landscape of companies (Dijkmans, Kerkhof, & Beukeboom, 2015; Elia, Giuffrida, Mariani, & Bresciani, 2021). Moreover, these technologies have streamlined consumer access to information and purchasing options (Mariani, Borghi, & Kazakov, 2019). In essence, technological disruption has brought about noticeable changes in both the business and consumption realms, reshaping traditional manufacturing and service delivery approaches on one hand (Bresciani, Huarng, Malhotra, & Ferraris, 2021; Kirova & Thanh, 2019), and altering how products and services are consumed on the other. Notably, the proliferation of big data, internet connectivity, social networks, and the internet of everything is driving transformations in both production and consumption (Bilgihan, Barreda, Okumus, & Nusair, 2016; Bresciani, Ferraris, & Del Giudice, 2018; Mariani, Borghi, & Kazakov, 2019).

The restaurant industry plays a crucial role in society by providing a wide range of dishes to cater to diverse tastes and preferences. Traditional restaurants have traditionally served as important spaces for dining, socializing, and building relationships. However, they now face increasing competition from digitalized counterparts due to various challenges, including the COVID-19 pandemic, technological advancements, shifting consumer preferences, and the rising demand for convenience. In fact, the National Restaurant Association reported that over 110,000 restaurants in the UK closed permanently or for the long term in 2020 due to the pandemic (Gonzalez, 2020).

Present-day economic development trends demand novel approaches to managing technology and operational principles within the restaurant industry. Notably, the restaurant business places significant emphasis on customer satisfaction. Companies in this sector are now offering more than just culinary services; they are also enhancing the dining experience with visual and emotional elements. This shift necessitates the development of not only culinary services but also additional services that effectively manage customers' emotions and impressions.

In light of these circumstances, to gain a competitive edge, it has become essential to introduce innovations in product offerings, marketing strategies, information technologies, resource allocation, and overall business management practices. The global nature of economic challenges, exacerbated by events like the COVID-19 pandemic, coupled with intense market competition, further underscores the importance of embracing innovation in the ongoing development of the restaurant industry. This innovation is particularly relevant in the context of digitizing the entire spectrum of business processes (Shtal et al., 2021).

The COVID-19 pandemic, which began in March 2020, significantly transformed the state of the restaurant industry. The necessity to implement social distancing measures, hygiene protocols, nationwide lockdowns, and address evolving customer expectations prompted restaurant owners to modify their business models. To overcome these challenges, restaurants had to embrace digitalization, implementing digital platforms, QR codes for menus, new technologies, and offering online ordering and delivery services.

In recent years, there has been a noticeable shift from traditional restaurants to digitalized ones. Digitalization in the restaurant industry refers to the use of digital technologies to transform business models, create new revenue opportunities, and provide value to customers (Gartner Glossary, n.d.). Processes that were once executed using pen and paper have been replaced with digital tools, elevating the dining experience. Digitalized restaurants offer customers the convenience of online food ordering, mobile app-based bookings, and seamless payment options.

The use of digital technologies in restaurants has optimized operations and enhanced the quality of customer service. Mobile applications have become a significant aspect of digitalized restaurants, allowing customers to access menus, place orders, make reservations, and pay directly from their smartphones. Social media platforms like Facebook, Instagram, and Twitter have also become essential for restaurants to engage with customers and promote their businesses. Contactless payments have expedited transactions, while self-ordering kiosks have streamlined operations, reduced labor costs, and minimized order errors.

There is limited information regarding the digitalization of services within the restaurant context (Batat, 2021). Various concepts related to affordance have been proposed for studying the adoption and utilization of technology, as discussed by Apostolidis, Brown, Wijetunga, & Kathriarachchi (2021). Lee (2010) made a distinction between core affordances, deliberately designed by technology providers, and tangential affordances, which are not intentionally designed but rather perceived by users. This differentiation leads to variations between positive affordances (those desired) and negative one (Apostolidis, Brown, Wijetunga, & Kathriarachchi (2021)). Consequently, differing perceptions of the value that service digitalization can provide have a substantial impact on the process of value co-creation and customers' experiences.

This study aims to explore and analyze customer perceptions and views regarding digitalized restaurants compared to traditional ones. It investigated the factors influencing customers' decision-making processes in favor of digitalized restaurants. The study involved an online survey with 135 respondents who had visited both types of establishments. The findings provide valuable insights for restaurant owners and managers considering the implementation of digital technologies, facilitating the industry's transformation in line with customer expectations.

In conclusion, digitalization has revolutionized the restaurant industry by leveraging technology to enhance customer experiences and streamline operations. Digitalized restaurants offer convenience through mobile apps, online ordering, and contactless payments. This study seeks to understand customer perceptions and preferences to assist restaurant owners in effectively adopting digital technologies.

## **LITERATURE REVIEW**

### **Customer Perspective and Satisfaction**

At present, competition is on the rise across all economic sectors. For businesses operating in the public catering industry, which primarily provide services, the challenge of attracting customers is a pertinent concern. The heightened focus on customer attraction in these companies is associated with the unique characteristics of services as a product. Customer satisfaction is a very important factor in marketing, because it can help companies increase their sales and revenue. It is described as a measure of how satisfied customers are with a company's products, services, and capabilities (Tang et al., 2022). In the phase following a purchase, customer happiness is assessed by comparing expectations and perceived service quality (Teoh et al., 2022). When customers are happy with the services or products provided by the company, they tend to become loyal customers and make repeat purchases. On the contrary, customers will be irater when reality falls short of their expectations when their expectations are higher.

Studies have shown that customer satisfaction has a direct relationship with the revenue generated by the business. The more satisfied customers are with their experience, the higher the likelihood they will make repeat purchases. This contributes to increased customer loyalty and generates greater revenue.

In addition, customer satisfaction also plays a role in influencing business decisions. Organizations often use customer feedback to improve and improve their products or services. High customer satisfaction can also create word-of-mouth referrals, where satisfied customers recommend the business to others. This can increase the number of customers and expand the business range.

Studies also show that highly satisfied customers tend to make more frequent purchases than customers who are only "somewhat satisfied". In some cases, satisfied customers may even purchase 3 to 10 times more. Therefore, creating high customer satisfaction is a key goal for any business.

Overall, customer satisfaction is a very important aspect of marketing and contributes to increased sales, revenue, customer loyalty and recommending businesses to others. Companies must focus on providing a good experience to customers to achieve high satisfaction and achieve success in their business.

### **Efficiency and Effectiveness**

Efficiency in the customer context refers to performing tasks or processes optimally using available resources. It plays a significant role in customer satisfaction by impacting various factors as follows. The delivery of a service is intrinsically linked to the production process. Consequently, the quality of the service relies significantly on the psychological and emotional state of the customer, their expectations, and the conduct of the service staff, encompassing their demeanor and adherence to service standards. The introduction of electronic menus, as part of the digitalization of the service process in restaurants, would eliminate the impact of personal factors associated with the staff on the customer experience (Pyanikova et al., 2020).

### **Response Time**

In contemporary business, the adoption of process automation is on the rise, as it enhances the efficiency of particular tasks by enabling them to be completed more swiftly or with fewer resources (Samad, McLaughin, & Lu, 2007; Ivančić, Vugec, & Vukšić, 2019; O'Grady, Chong, & Morrison, 2021). The digitalization of business processes involves the execution of these processes through information technologies, the establishment of

control mechanisms, monitoring, and the improvement of data and information transparency, all aimed at analyzing business operations more effectively and identifying potential weaknesses. Within the restaurant industry, the digitalization of customer service represents a step toward delivering more efficient services. Currently, comprehensive system automation that allows patrons to place orders directly from their tables and transmit the information to the kitchen staff is not widely prevalent. Customers value prompt responses from businesses. If a business can swiftly address customer inquiries or issues through responsive customer service or efficient online ordering systems, it enhances customer satisfaction and makes them feel valued.

### ***Wait Time***

The term “perceived waiting time” pertains to the duration of waiting time as estimated by customers (McGuire, Kimes, Lynn, Pullman, & Lloyd, 2010). Munichor and Rafaeli (2007) emphasized the importance of time as a limited resource that should be used judiciously, given its significance as both a financial and business asset. Consequently, time is often considered a critical factor for enhancing productivity, with the understanding that input should equal output, a perspective shared by both customers and service providers. Any disparities between the actual waiting time and the customer's perceived waiting time can influence the customers' overall perception of their “service experience”. Additionally, Rose and Nkirina (2017) discovered that perceived waiting time significantly impacts customer satisfaction, especially during idle periods. Long wait times are generally disliked by customers. By reducing waiting times in service processes such as queues, delivery, or response times, businesses can improve customer satisfaction. Faster access to products or services leads to greater satisfaction.

### ***Operational Efficiency***

When a business runs its operations efficiently using appropriate technology or systems, it creates a smoother and faster service process. Customers experience fewer obstacles or inconveniences, resulting in increased satisfaction. As stated by Sanjeev (2007), the restaurant industry, inherently driven by the need to serve people whenever they wish to dine, is characterized by a blend of predictable, seasonal patterns and unpredictable, individual customer demands. This duality poses a challenge for restaurateurs in achieving operational efficiency. Consequently, the amalgamation of these two factors, macro-predictability, and micro-uncertainty, introduces economic risks that hinder the attainment of efficiency in restaurants, as noted by Moolman (2011). The methods employed for gauging operational efficiency in the restaurant sector have been less than ideal, often yielding narrowly focused and frequently inaccurate measurements, as pointed out by Andersson (1996).

Effectiveness refers to achieving desired goals or delivering expected results. In the customer context, effectiveness influences satisfaction through the following aspects.

### ***Product or Service Quality***

Customers seek high-quality products or services that meet their expectations. When a business consistently delivers products or services of superior quality, customers feel satisfied and fulfilled.

### ***Fulfillment of Needs***

Understanding and addressing customer needs effectively is crucial. When a business can identify and fulfill customer needs with suitable solutions or offers, customers feel valued, leading to increased satisfaction.

### ***Customer Experience***

A positive customer experience directly impacts satisfaction. By creating a pleasant experience throughout the customer journey, from initial interaction to product or service delivery, businesses can enhance customer satisfaction and foster loyalty.

Digital restaurants, compared to traditional ones, offer increased effectiveness and efficiency. Automated ordering and payment systems, such as self-order kiosks and mobile ordering apps, streamline restaurant operations. These solutions reduce waiting times, increase accuracy, and provide a convenient and user-friendly ordering experience. Consequently, there is a positive relationship between effectiveness and efficiency and customer convenience.

H1: There is a positive relationship between Effectiveness and Efficiency and Customer Perspective and Satisfaction.

### **Convenience**

Customer convenience, or service convenience, is a key factor influencing customer satisfaction in the context of digital restaurants. It encompasses customers' perceptions of the time and effort required to purchase or use goods and services. Research conducted by Berry, Seiders, and Grewal highlights the positive impact of service convenience on consumers. When customers have a comfortable and convenient experience in obtaining goods and services, it leads to increased satisfaction.

In the realm of digital restaurants, convenience is provided through various features such as online ordering, easy access to menus, multiple payment options, and delivery services. These conveniences contribute to higher customer satisfaction levels.

The online ordering system allows customers to effortlessly place orders without physically visiting the restaurant. They can view the complete menu, check food availability, and choose their preferred items. Furthermore, the availability of various payment options gives customers flexibility in selecting the most convenient method for them. Delivery service plays a significant role in convenience as well. Customers can simply place an order through the app or website, and their desired food will be delivered directly to their location. This eliminates the need for customers to travel to the restaurant and wait for their orders. By offering these conveniences, digital restaurants provide customers with a more comfortable and efficient experience, ultimately increasing customer satisfaction. Customers can save time and effort in obtaining the food and service they desire.

H2: There is a positive relationship between Convenience and Customer Perspective and Satisfaction.

### **Visual**

Visual merchandising is an important technique in presenting products in a way that is attractive and captivates consumers. This is done through the arrangement of light, sound, atmosphere, color, and music which aims to generate interest and comfort for consumers. Appropriate visual merchandising can affect consumer satisfaction, including the level of comfort in the store and the suitability of the product display in the store.

In the restaurant context, digital restaurants have an advantage when it comes to visual merchandising compared to traditional restaurants. Digital restaurants can create more vibrant and attractive food menu displays compared to simply having pictures on the walls. With digital displays, menus can be presented in dynamic and interactive visual

forms, such as through touch screens or other digital interfaces. This enables restaurants to showcase vivid and detailed images, display a variety of dishes, and provide additional information such as ingredients, nutrition details, or food recommendations that capture consumers' attention.

In addition, digital restaurants can also take advantage of technologies such as augmented reality (AR) or virtual reality (VR) to provide consumers with a more attractive and immersive visual experience. For example, consumers can use an AR application to see an image of a dish that appears to be "floating" above their table before ordering. Thus, digital restaurants can optimize visual merchandising by using more sophisticated technology and providing consumers with a more interesting experience.

H3: There is a positive relationship between Visual and Customer Perspective and Satisfaction.

### **Time Consumption**

Waiting time is defined as the period during which individuals or goods are queued up, anticipating service. This waiting time significantly influences customer satisfaction. In today's fast-paced world, customers have developed a preference for expeditious and hassle-free service. Their aim is to acquire their desired products or services swiftly. On the flipside, prolonged waiting times have the potential to evoke feelings of boredom and ultimately lead to customer dissatisfaction.

However, the flipside of the coin presents an intriguing possibility. When customers receive their orders within, or even surpassing, the anticipated lead time, their satisfaction can be notably amplified. This phenomenon of exceeding expectations holds the power to create a positive impression and enhance the overall customer experience. In the contemporary landscape, the choice between modern and traditional restaurants is often swayed by the factor of speed. Modern customers exhibit a propensity to favor establishments that offer expedited service. This preference steers them toward modern restaurants that have adeptly harnessed technology to streamline their operational processes. By doing so, these restaurants effectively mitigate waiting times, delivering an experience that aligns with the fast-paced lifestyle of today's consumers.

The key driving force behind this efficiency is the astute utilization of existing technology. Modern restaurants leverage digital solutions and automated systems to optimize their operations. Such advancements translate into a more efficient and time-conscious encounter for the customers. With the strategic integration of technology, these establishments are not only meeting but often surpassing the expectations of customers in terms of service speed and convenience.

In a world where time is a precious commodity, the ability of modern restaurants to curtail waiting times through the shrewd application of technology holds immense appeal. The end result is an experience that is characterized by efficiency, convenience, and a reduced sense of waiting. This strategic leveraging of technology serves as a testament to the adaptability of modern restaurants to the ever-evolving preferences of contemporary consumers.

H4: There is a positive relationship between Time Consumption and Customer Perspective and Satisfaction.

### **Customization**

The ease of customization in digital restaurants has a significant effect on customer satisfaction. The following are some of its influences.

### ***Food Personalization***

Digital restaurants often provide customers with meal customization options. Customers can choose additional components, toppings, or sauces according to their preferences and needs. This convenience provides a personalized experience and allows customers to get food that suits their tastes. This can increase customer satisfaction because they feel they have control over the food they order.

### ***Dietary Adaptations or Food Preferences***

Digital restaurants can accommodate customers with special dietary requirements or food preferences. They can offer options such as vegetarian, gluten-free, or allergen-free dishes. This customization feature allows customers to easily adapt the food to their specific needs, enhancing their satisfaction with the restaurant.

### ***Portion and Price Control***

Digital restaurants empower customers to have control over food portions and prices. Customers can choose portion sizes that match their appetite or select meal plans with price combinations that align with their budget. This customization option provides customers with flexibility, enabling them to make choices that align with their preferences and budget, leading to increased satisfaction.

### ***Freedom of Expression of Preferences***

The process of digitization has improved consumers' experiences through the provision of tailored demand choices (Aryani et al., 2021). Digital restaurants often provide comment boxes or special options where customers can express their preferences or make special requests regarding their orders. This convenience allows customers to communicate their specific desires, such as adding or removing ingredients, adjusting spiciness levels, or providing special instructions. Accommodating these preferences creates a tailored experience, meeting customer expectations and increasing satisfaction.

Overall, the ease of customization in digital restaurants offers customers flexibility and control over their dining experience. Digital restaurants can enhance customer satisfaction and create a more personalized and enjoyable dining experience by providing options for personalizing food based on individual preferences.

H5: There is a positive relationship between Customization and Customer Perspective and Satisfaction.

### ***Loyalty and Reward***

The growth of any business is invariably intertwined with the concept of customer loyalty. This symbiotic relationship between a company and its loyal customer base is underscored by the fact that customer loyalty does not blossom in the absence of customer satisfaction.

Indeed, the crucial link between customer loyalty and customer satisfaction has been highlighted earlier. The bedrock of customer loyalty is laid upon the foundation of customer satisfaction. When customers are content and pleased with their experiences, they are more likely to forge enduring relationships with a company. This relationship is nurtured by the gratification derived from the products and services rendered.



The dynamics at play in this relationship can be distilled to a simple truth: customer loyalty is a byproduct of customer satisfaction. When customers find themselves consistently satisfied with the quality of products and services furnished by a company, a sense of trust and attachment takes root. This satisfaction acts as a catalyst, fostering a strong and enduring bond between the customer and the brand.

In the broader business landscape, competition is an inherent facet of operations, as Anwar and Qadir (2017) suggests. In this environment, customer loyalty emerges as a defining factor that sets a company apart from its rivals. Loyalty transcends mere transactions; it encapsulates the conscious choice of customers to favor one company's offerings over those of competitors. This strategic allegiance showcases customers' trust in the brand's ability to deliver value that exceeds that of competitors consistently.

Chambers (2022) encapsulates this loyalty phenomenon succinctly by emphasizing that loyal customers make a deliberate and reliable choice of a particular company's products or services over alternatives. This reliability springs from a history of satisfying experiences. In a sense, loyalty signifies customers' ongoing vote of confidence in a company's ability to meet their needs and preferences consistently.

To sum up, the interplay of customer loyalty and satisfaction is at the core of business growth. This symbiotic relationship reinforces the fact that enduring customer loyalty is an outcome achieved when customer satisfaction is not only met but consistently exceeded. The quality of products and services, often influenced by competition, is a pivotal determinant of this customer-company alliance.

H6: There is a positive relationship between Loyalty and Reward and Customer Perspective and Satisfaction.

### **Feedback**

Customer feedback serves as a critical avenue through which businesses can gain invaluable insights into the levels of customer satisfaction they are achieving. This information not only sheds light on customer experiences but also provides a window into their interactions with a company's products and services. Leveraging this feedback effectively allows businesses to address customer issues promptly, preempt customer churn, and establish a steadfast and loyal customer base.

The significance of customer feedback becomes particularly evident when considering its role in refining and elevating products and services. By carefully analyzing feedback, businesses can identify areas that require improvement, make necessary adjustments, and align their offerings more closely with customer expectations. This iterative process, fueled by customer feedback, is instrumental in ensuring that the delivered experiences are consistently meeting or exceeding customer needs, resulting in heightened satisfaction levels.

When consumers stand at the precipice of a purchasing decision, they tend to heavily rely on the insights provided by fellow customers. This reliance is especially notable in the digital realm, where online reviews hold a considerable sway over consumer choices. This assertion is well-supported by statistics indicating that a staggering 98% of customers read online reviews for local businesses. This points to the profound impact that peer-generated content, particularly reviews, exerts on consumers, significantly influencing their perception of products and services.

Within the realm of influence, user-generated content, such as customer reviews, reigns supreme. Research underscores that this type of content is approximately 8.7 times more influential than influencer-generated content and about 6.6 times more influential than branded content. The reason behind this potent influence lies in the authenticity and relatability of customer-generated content, which resonates more deeply with potential buyers than other forms of promotion. This underscores the notion that the experiences and opinions of real customers wield a persuasive power that transcends other marketing tactics.

Further cementing the impact of customer feedback on consumer behavior, statistics reveal that a significant proportion—9 out of 10 individuals—read reviews before making the decision to either visit or purchase from a business. This reflects the pivotal role that feedback plays in shaping consumer choices, as prospective customers seek assurance and validation from the experiences of their peers.

In the context of the culinary landscape, customer feedback carries a pronounced weight in influencing dining choices. Positive reviews often act as beacons, guiding customers toward restaurants that have garnered favorable reputations for their quality and service. The sway of customer feedback on restaurant selection is particularly strong, as patrons opt for establishments that have left a positive impression on their previous customers. In light of these considerations, it is evident that the relationship between customer feedback and customer perspective and satisfaction is robust. By proactively seeking, acknowledging, and acting upon customer feedback, businesses can bolster their offerings, instill consumer trust, and ultimately elevate the overall satisfaction of their clientele.

H7: There is a positive relationship between Feedback and Customer Perspective and Satisfaction.

## **RESEARCH METHOD**

An online survey was conducted using Google Forms to understand customer perceptions and views regarding digitalized restaurants and how these perceptions may influence their preferences. Respondents were allowed to choose their responses using a Likert scale of five points, ranging from 1 (indicating strong disagreement) to 5 (indicating strong agreement). The questionnaire is divided into three sections: demographic and general questions (dining habits) and customers' views on digitalized versus traditional restaurants. We used social media channels, including WhatsApp and Telegram, to reach out to our targeted respondents, customers who have recently dined in digitalized and traditional restaurants. The survey drew 135 responses from customers who recently dined in digitalized and traditional restaurants.

**Table 1. Summary of Respondent's Profile (N=135)**

Response	Frequency	Percentage (%)
<b>Gender</b>		
Male	37	27.4
Female	98	72.6
<b>Age</b>		
20 years old and below	29	21.5
21-30 years old	90	66.7
31-40 years old	7	5.1
41-50 years old	5	3.7
51 years old and above	4	3
<b>Degree of education</b>		
Bachelor (or lower)	130	96.3
Master	4	3
Ph.D.	0	0
Other	1	0.7
<b>Occupation</b>		
Student	104	77
Office Worker	10	7.4
Business Owner	5	3.7
Government Officer / State Enterprise Employee	12	8.8
Other	4	3.1
<b>Annual Income</b>		
Less than RM25,000	41	30.4
RM25,000 - RM 50,000	8	5.9
RM50,001 - RM 100,000	6	4.4
RM101,000 or more	0	0
No Income	80	59.3
<b>How frequently do you dine out at restaurants?</b>		
Several times a week	34	25.2
Once a week	30	22.2
A few times a month	40	29.6
Rarely	28	20.7
Never	3	2.2

Table 1 presents a summary of the respondents' profiles. Over half of the respondents were female (72.6%). 66.7% of respondents were 21-30 years old. 77% of respondents were still studying, indicating a highly educated sample. Since most of the respondents are students, thus the choice of no income accounts for 59.3%. 77% of respondents at least dine out at restaurants a few times a month and more frequently; in contrast, only 20.7% and 2.2% rarely and even never dine out at restaurants, respectively.

### Measures

The measurement scales for all variables utilized a 5-point Likert scale, where respondents could indicate their level of agreement or disagreement, ranging from 1 (representing strong disagreement) to 5 (representing strong agreement). All measures can be found in Appendix 1.

### ***Efficiency and Effectiveness***

The researchers developed five items to measure the efficiency and effectiveness provided by digitalized restaurants. Respondents rated five statements describing their view on the extent to which they feel digitalized restaurants provide more efficiency and effectiveness than traditional restaurants. An example of the item includes “Digitalized restaurants provide better opportunities for reducing errors in order taking and preparation”.

### ***Perceived Benefits***

The researchers developed six items to assess the information of perceived benefits: exploring the convenience, visuals, time consumption, customization, loyalty and rewards programs, and feedback.

### ***Convenience***

Convenience refers to how participants view the ease and simplicity of using digitalized restaurant services. It includes online ordering, menu accessibility, multiple payment options, and delivery services. An example of the item is “Digitalized restaurants provide more convenience compared to traditional restaurants”.

### ***Visuals***

Visuals refer to how participants view the presentation and representation of food items through images or videos in digitalized restaurants. An example of the item includes “Digitalized restaurants can provide rich visual experiences by showcasing high-resolution images of their dishes, along with detailed descriptions and nutritional information”.

### ***Time Consumption***

Time consumption refers to how participants view the time required for ordering, preparing, and receiving food from a digitalized restaurant. An example of the item includes “Digitalized restaurants using digital tools to contactless place orders and pay for my meals saves me time”.

### ***Customization***

Customization refers to how participants view the ability of customers to personalize their orders according to their preferences and dietary requirements in digitalized restaurants. An example of the item includes “Digitalized restaurants provide better opportunities for customization of orders compared to traditional restaurants”.

### ***Loyalty and Rewards Programs***

Loyalty and rewards programs refer to how participants view these initiatives implemented by digitalized restaurants to incentivize and retain customers. An example of the item includes “Digitalized restaurants provide better opportunities for loyalty and rewards programs compared to traditional restaurants”.

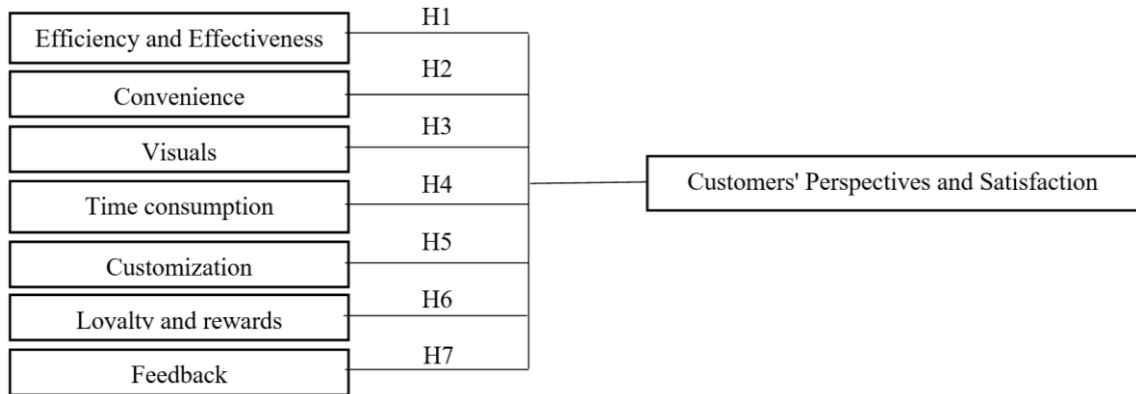
### ***Feedback***

Feedback refers to how participants view platforms provided by digitalized restaurants for customers to leave reviews, ratings, or comments. An example of the item includes “Digitalized restaurants providing me to give feedback through digital means is more comfortable for me”.

**Customers' Perspectives and Satisfaction**

The researchers developed three items to assess the perspectives and satisfaction of customers. An example of the item includes, "Overall, you evaluated that digitalized restaurants are satisfied with reducing or avoiding unnecessary personal contact, which helps curb the spread out of the virus".

**Figure 1. Research Model**



The data collected from the questionnaires underwent thorough data cleaning procedures before conducting analyses using IBM SPSS Statistics Software Version 27. Factor analysis and Cronbach's alpha tests were performed to assess validity and reliability. Cronbach's alpha values exceeding 0.6 were considered highly reliable, while those below 0.6 were rated low. Values ranging from 0.60-0.80 were considered moderate and adequate, and values from 0.8 to 1.00 indicated good reliability. Statistical analysis techniques were utilized to uncover patterns, correlations, and trends in the data, facilitating meaningful and insightful conclusions. Multiple regression analysis and other statistical techniques were also employed to test the initial hypotheses.

**RESULTS**

**Table 2. Descriptive, Correlation and Cronbach's Coefficient Analysis (N = 135)**

Variables	1	2	3	4	5	6	7	8
<b>Independent Variables</b>								
Efficiency and effectiveness	0.892							
Convenience	0.678*	0.886						
Visuals	0.567*	0.663*	0.893					
Time consumption	0.508*	0.654*	0.549*	0.893				
Customization	0.589*	0.619*	0.474*	0.579*	0.895			
Loyalty and rewards	0.514*	0.619*	0.554**	0.611*	0.620*	0.891		
Feedback	0.607*	0.614*	0.642*	0.557*	0.452*	0.614*	0.892	0.906
<b>Dependent Variables</b>								

Customers' perspectives and satisfaction	0.486*	0.499*	0.425*	0.429*	0.440*	0.454*	0.461*	3.52
Mean	3.950	3.95	4.01	4.13	3.79	3.84	3.91	1.036
Standard Deviation	0.987	0.831	0.881	0.876	1.008	0.999	0.926	1
Min	1	1	1	1	1	1	1	5
Max	5	5	5	5	5	5	5	

Note: N = 135, \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

For further discussion, we will interpret results based on correlation coefficients above. For the value greater than 0 would indicate that the correlation between two variables is a positive relationship while less than 0 shows that the value has negative relationship. All independent variables indicate a positive relationship towards Customers' Perspectives and Satisfaction, which is the dependent variable. For Efficiency and effectiveness (0.486), Convenience (0.499), Visuals (0.425), Time consumption (0.429), Customization (0.440), Loyalty and rewards (0.454) and Feedback (0.461).

**Table 3. Determination Coefficient Test Result**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.573 <sup>a</sup>	.329	.292	.872

a. Predictors: (Constant), Feedback, Customization, Time consumption, Visuals, Efficiency and Effectiveness, Loyalty and Rewards, Convenience

**Table 4. T-Test Result**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.446	.418		1.067	.288
	Efficiency and Effectiveness	.178	.115	.170	1.553	.123
	Convenience	.163	.156	.131	1.049	.296
	Visuals	.040	.126	.034	.315	.754
	Time consumption	.066	.125	.056	.531	.597
	Customization	.096	.109	.093	.877	.382
	Loyalty and rewards	.104	.114	.100	.910	.365
	Feedback	.135	.124	.120	1.086	.280

a. Dependent Variable: Customers' Perspectives and Satisfaction

The table indicates that all independent variables, except for visuals, time consumption, and customization, have a significant impact on the dependent variables, customer perspective and satisfaction. However, visuals, time consumption, and customization do not demonstrate a significant relationship with customer perspective and satisfaction. This suggests that these factors do not significantly influence customer perspective and satisfaction in the future.

## **DISCUSSION**

### **Customer View on Digitalized Restaurant vs Traditional Restaurant**

This survey shows that majority of the customers will prefer digitalized restaurant over traditional restaurant. This is because through the survey we can know that digitalized restaurant had more benefit and demand for the customers. Around 135 respondents which from different races had responded for the survey and these are the outcomes and all of the customers had been agreed that digitalized is better than traditional restaurant. Through this survey we can conclude that customers prefer restaurants with advanced technology which makes it more convenient and easier to order the food.

### **Dining Habit**

It can be seen that the customers usually will dine in at the restaurant frequently. We can know that customers prefer more towards the quality of the food and drinks and the price of the food which are reasonable toward the food they order. This is because the majority of the customers choose these two options. These are the factors that influence them to choose a restaurant over other restaurant. More quality and tasty food and drinks with reasonable prices will attract more customers to choose the restaurant as their priority. The customer also agreed on the importance of having the reservation system when dining in and availability of contactless ordering or payment during dining out. These advanced methods will make them more convenient and easier to make payment. This also means the customers will not let the waiter wait for what the customers are ordering, and the customers can take their own time to decide what they need to dine in that restaurant. For choosing quality food and drinks and the prices of the items in the restaurants either digitalized or traditional restaurants, they will find the feedback of the restaurants from the customers who have done so. The customers will find the reviews online and the ratings that have been given for the restaurants. They also agreed that giving reviews or checking on the feedback is very important with making the right decision of.

### **Customers' Perspectives and Satisfaction**

It shows that customer view and their satisfaction on the digitalized restaurant or traditional restaurant. In this topic, we can see the customer being neutral that they are not willing to choose either a traditional restaurant or digitalized restaurant. Majority of the customers had agreed that the social media had influenced them to choose over the restaurant because of the advertisements which were so attractive and had influenced them to give a try toward the food and drinks in that particular restaurant. The customer is also satisfied with the restaurant which offers the digital menu options and uses of the technology which makes it easier to order the food or make the payment. The customers also will be satisfied that each of the restaurants either digitalized or traditional must have the options of online ordering and delivery. This is because customers can make their menu selection in their own location such as home and enjoy their meal after their meal has been delivered to their home.

### **Efficiency and Effectiveness**

It shows the customer views towards the digitalized restaurants and traditional restaurants which are more efficient and effective. In this topic, the majority of the customers agreed that the digitalized restaurants are more effective and efficient. It is because the majority of the customers agreed that the digitalized restaurant has the faster service compared to the traditional restaurant. Digitalized restaurant will take the order quickly and prepare the food as fast as they could because they did not want the customer to wait for the food in hunger compared to the traditional restaurant takes the order slowly. Through this, the customers also agreed that the digitalized restaurant will reduce wait time and improve the service and also reduce the food waste happening in

that particular restaurant. In this topic, we also can notice that the customers agreed with the effectiveness of the restaurant food order tracking compared to the traditional restaurant. Toward the agreement from the customer, we can say that the customer agreed with the digitalized restaurant providing the food and drinks more efficiently and effectively toward the customer.

### **Perceived Benefits**

The study shows the belief of the customer that what are the positive outcomes that the customers receive. Through this topic, in customers' views, they agreed that the digitalized restaurant provides more convenience and rich visual experiences by showcasing high-resolution images of their dishes, along with detailed descriptions and nutritional information compared to the traditional restaurant. The customer also agreed that the digitalized provide better opportunities for loyalty and rewards programs compared to traditional restaurants such as discount prices on the food which was ordered. They also agreed that digitalized restaurant using digital tools to contactless place orders and pay for their meals saves their time. In their view, they think it can avoid a long queue to pay for the meal and it takes a long process and time to finish the payment. They also agreed that digitalized restaurant giving feedback through digital means is more comfortable for them. It is because they can give their own personal feedback without anyone know through the digital which made them feel privacy.

### **Overall Satisfaction**

The research shows that which restaurant customer prefer from overall perception and satisfaction. Through the digitalized restaurant, the customer agreed that it can reduce or avoid unnecessary personal contact, which helps curb the spread of the virus. It is because nowadays the virus Covid-19 is spreading among the world and digitalised restaurant made an alternative way to prevent the virus spreading. They also agreed that they can enhance the overall dining experience and create a more immersive environment. So, for the overall satisfaction, they prefer the digitalized restaurant more in the future.

## **CONCLUSION**

Based on the study, most customers prefer digitalized restaurants over traditional ones. The survey revealed that this type of restaurant brings more benefits and convenience to customers. Thus, the survey led to the following conclusions which should be very useful for owners and managers of restaurants due to the constantly changing needs and preferences of their customer.

First of all, the main factors that influence the choice of a restaurant over other restaurant are availability of quality and tasty food and drinks with reasonable prices, having the reservation system and availability of contactless ordering or payment.

Furthermore, due to the accelerating pace of life, customers now prefer simplicity, ease, convenience and speed of ordering and eating food. They do not give preference and try to avoid long queues to pay for food as it takes a long time. Therefore, customers prefer restaurants that offer digital menu options and use technology that facilitates ordering food or paying. The availability of digital tools for contactless placing orders and paying for food, online ordering and delivery is also important as it saves customers' time.

It was also found that majority of customers tend to be oriented towards public opinion and social media and when choosing a restaurant will be guided by the feedback from customers who have already dined at the restaurant before. Customers are willing to take the time to find online reviews and ratings that have been given to restaurants,



because they believe that providing or checking feedback is essential to making the right choice of restaurant for dinner. As for digitalized restaurants, their advantages are that in these restaurants customers can give feedback via digital means which is more convenient for customers as they can give their personal feedback that no one knows about, thanks to digital technologies that make them feel confidential.

Moreover, digitalized restaurants have been found to be more effective and efficient. Thus, customers consider that digitalized restaurants have faster service compared to the traditional ones, they reduce waiting time and the amount of food waste, have an effective food order tracking system.

In addition, for a modern customer visual perception is very crucial before ordering. So, another advantage of digital restaurants that singles them out among other restaurants is rich visual experience, demonstrating high-resolution images of their dishes, detailed descriptions and nutritional information.

And finally, digitalized restaurants help to reduce or avoid unnecessary personal contact, which, for example, helps curb the spread of the coronavirus. Thus, digitalized restaurants offer a more convenient and personalized experience for customers, leading to increased customer satisfaction and loyalty. As technology continues to advance, it is likely that more restaurants will adopt digital solutions to meet the changing needs and preferences of their customers.

This research explores the implications for the literature and business models in the restaurant industry. It highlights key factors that should be considered by managers when designing a business model and operational strategy for a restaurant. Understanding these factors can drive business growth and attract customers, leading to benefits such as customer loyalty, word-of-mouth promotion, and operational efficiency.

One important aspect is the customer perspective. By understanding what customers want, managers can provide better service, enhance convenience, and create a positive dining experience. This, in turn, can generate customer loyalty and attract new customers through referrals, without incurring additional promotion costs. It also contributes to the overall effectiveness of restaurant operations.

Digitalization plays a crucial role in the modern restaurant industry. By adapting to market needs and utilizing advanced technology, restaurants can develop new services and systems. For instance, implementing digital solutions like contactless reservations, online ordering, and contactless payments can reduce customer waiting times and operational burdens. These innovations align with the growing trend of technological advancements and cater to the evolving needs of customers.

These results also imply that the restaurant industry may need to improve its services by implementing technology that is acceptable for use in order to meet consumer expectations and demands regarding dining. Therefore, maintaining industry relevance and remaining competitive will be good indicators. More restaurants would upgrade their services in the direction of digitization if they were competitive, making them relevant in the market. Long-term benefits would be significant as the restaurant business invests in this technology to serve the customers. As most services are now digitalized, there may be an increase in efficiency and a decrease in costs. These benefits may also make them seem more distinctive or different than traditional ones and make them a more long-term option. If more restaurants decide to digitalize their operations, this will also lead to an increase in demand for the IT sector.

By leveraging these insights, restaurant management can expand their service offerings, ranging from ordering to dining experiences. This has positive impacts such as increased profitability, customer growth, enhanced customer loyalty, attraction of new customers, long-term sustainability, and mitigating the spread of contagious viruses like COVID-19.

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#### **DECLARATION OF CONFLICTING INTERESTS**

The authors declared no potential conflicts of interest.

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