**Consumer Perceptions on the Impact of Online Food Delivery Services on Traditional Restaurants Dining in Ghana**

***Abstract***

*The intersection of technology-enabled convenience and experience-driven gastronomy presents a complex dynamic that warrants careful examination from the consumer perspective. Understanding how customers perceive this relationship is critical for restaurants seeking to navigate the evolving foodservice landscape effectively. The present study investigates how consumers perceive the influence of online food delivery (OFD) services on traditional restaurants, focusing on revenue, clientele, and satisfaction. This study employed a cross-sectional, quantitative research design to examine consumer perceptions regarding the impact of online food delivery (OFD) services on restaurants. This approach was selected to enable systematic measurement and statistical analysis of consumer perspectives across multiple dimensions, including perceived revenue impacts, customer reach, and satisfaction levels. A multi-stage stratified random sampling technique was employed to ensure representative data collection across Ghana's three largest urban centers. Data were collected using a structured questionnaire developed based on validated instruments from previous hospitality and consumer behavior research. The analytical approach included descriptive statistics to characterize sample demographics and response patterns, reliability analysis using Cronbach's alpha to verify internal consistency of multi-item scales, and chi-square tests to examine associations between categorical variables such as demographic factors and perception categories. Results reveal consumers perceive OFD services significantly reduce in-restaurant dining frequency (p=0.000) but believe these platforms do not negatively affect restaurant revenue (p=0.261) or satisfaction levels (p=0.196). The comparison of satisfaction levels between OFD experiences and in-restaurant dining reveals intriguing insights. While the ANOVA results (F = 1.649, p = 0.196) indicated no significant overall difference in satisfaction between the two types of service, the paired sample t-test revealed a different story at the individual level. Findings suggest consumers view OFD as complementary rather than detrimental to restaurant financial viability. Recommendations include adopting hybrid service models, enhancing digital marketing, and optimising operational efficiency to align with evolving consumer preferences.*

***Keyword:*** *Online Food Delivery (OFD), Restaurants, Consumer Perceptions, Revenue Impact, In-restaurant dining Preferences*

**Introduction**

With the rapid advancements in technology, the Internet and mobile applications have become integral to everyday life, offering unprecedented convenience and value, particularly in the realm of online retail. Among these innovations, online food delivery services have emerged as a significant shift in consumer behavior, providing an alternative to traditional dining experiences (Maalouf et al., 2025). The restaurant industry has witnessed significant transformation with the proliferation of digital technology, particularly through the emergence of online food delivery (OFD) services. These platforms have revolutionised how consumers interact with food establishments, creating new channels for restaurants to reach customers beyond their physical locations (Suali, Srai & Tsolakis 2024). While the convenience of OFD services has been widely embraced by consumers, their impact on traditional restaurants remains a subject of considerable debate among industry stakeholders and researchers alike (Aryani, Singh, Khor, Kee, Selvia, Lee, Lee & Anantharavoo. 2022). Customers are able to explore all the options in the menu without being under any time pressure and end up purchasing more. The demand for online food delivery services has increased manifold. The food delivery system has innovative features such as customized food items, payment options and GPS tracking. Consumer desires are considered according to their wants and needs. Attractive promotional offers like discount coupons, cash back schemes, combo offers are pulling the consumers towards online food ordering system frequently (Frederick & Bhat, 2022).

In-restaurant dining establishments, historically characterised by their emphasis on ambiance, personalised service, and curated in-restaurant dining experiences, face unique challenges and opportunities in adapting to the growing prevalence of delivery platforms (Vo-Thanh, Zaman, Hasan, Akter, & Dang-Van, 2022). The intersection of technology-enabled convenience and experience-driven gastronomy presents a complex dynamic that warrants careful examination from the consumer perspective. Understanding how customers perceive this relationship is critical for restaurants seeking to navigate the evolving foodservice landscape effectively (Zhou, Zhu, Zheng, & Zhou, 2025).

The global food delivery market has experienced exponential growth, accelerated by the COVID-19 pandemic, with market value projected to reach $223.7 billion by 2027 (Furlan 2022). This dramatic shift has fundamentally altered consumer expectations and behaviors regarding restaurant services. According to Kilders, Vincenzina, & Jayson (2024)., the percentage of consumers utilising food delivery apps increased by 37% between 2019 and 2023, indicating a substantial shift in in-restaurant dining preferences. This transformation has prompted traditional restaurants to reconsider their business models and value propositions in response to changing consumer demands (Troise, Jones, Candelo, & Sorrentino, 2023).

For restaurants in particular, the integration of delivery services presents unique challenges related to maintaining food quality, preserving brand prestige, and translating experiential aspects of their service through digital channels (Philosophers & Soni 2024). While OFD platforms offer expanded market reach and revenue potential, they simultaneously introduce concerns regarding diminished control over the in-restaurant dining experience and potential cannibalisation of in-restaurant patronage (Sureeyatanapas, & Damapong, 2024). This tension between opportunity and threat underscores the need for empirical investigation into how consumers perceive these dynamics.

Several studies have examined operational aspects of OFD integration within restaurant business models (Kang, Lee & Namkung, 2018; Alt, 2021), yet there remains limited research investigating consumer perceptions regarding the impact of these services on traditional restaurant operations, particularly within specific cultural contexts such as Ghana. Naf, Annan, Aryeetey, Agyapong (2022) note that regional differences in in-restaurant dining culture significantly influence the adoption patterns and perceived impacts of food delivery platforms, highlighting the importance of contextually grounded research.

The rapid digitalisation of food service has created what Chowdhary (2024) describe as a "convenience revolution" that challenges traditional notions of in-restaurant dining out. This phenomenon has particular significance for in-restaurant dining establishments, whose value proposition has historically centered on immersive, sensory experiences that extend beyond the food itself (Batouei, Boninsegni, Leung, & Teoh, 2023). As Srinivasan, & Sherkar, (2024) argue, the migration of in-restaurant dining into delivery formats represents not simply a change in distribution channel but potentially a fundamental reconfiguration of the in-restaurant dining experience itself.

Consumer perception remains a critical factor in understanding this evolving relationship between OFD platforms and in-restaurant dining establishments. Perceived value, quality expectations, and satisfaction determinants may differ substantially between delivery and in-restaurant experiences (Zhou et al., 2025). Moreover, Philosophers & Soni, (2024) suggest that consumer perceptions regarding the impact of OFD on restaurant viability may influence patronage decisions and brand loyalty, creating potential feedback loops that further shape market dynamics.

Despite the growing body of research examining various aspects of OFD adoption, there exists a notable gap in understanding how consumers perceive the financial and operational impacts of these platforms on traditional restaurants, particularly within specific regional contexts (Aryani, 2022). This knowledge gap is especially pronounced in emerging markets like Ghana, where rapid technological adoption intersects with distinctive culinary traditions and in-restaurant dining practices Asempapa, 2022).

The Ghanaian restaurant sector has experienced significant growth in recent years, with in-restaurant dining establishments increasingly emerging in urban centers (Dzudzor, 2024). Simultaneously, the entry of international OFD platforms alongside local delivery services has created a dynamic and rapidly evolving foodservice ecosystem (Bannor & Amponsah 2024). Understanding consumer perceptions within this specific context provides valuable insights for both theoretical development and practical application.

This study addresses these research gaps by investigating how consumers perceive the impact of online food delivery services on traditional restaurants' revenue generation capabilities and customer reach within the Ghanaian context. Additionally, the research aims to provide insights into perceived differences in satisfaction levels between OFD experiences and traditional in-restaurant dining encounters. As noted by Su, Nguyen, Nguyen, Luu, & Nguyen-Phuoc (2023), such perceptions significantly influence consumer behavior and, consequently, the strategic decisions of restaurant operators.

The primary objectives of this study are:

1. To examine consumer perceptions of the impact of online food delivery services on the revenue and customer reach of traditional restaurants
2. To compare consumer perception of customer satisfaction levels between online food delivery experiences and restaurants

By exploring these objectives through empirical investigation, this research contributes to both theoretical understanding and practical knowledge regarding the evolving relationship between digital platforms and traditional hospitality services (DSouza & Sardesai, 2024). The findings offer valuable insights for restaurant operators navigating digital transformation, OFD platform managers seeking to enhance service value, and policymakers developing regulatory frameworks for the evolving digital food economy (Li, Mirosa, & Bremer, 2020).

**Materials and Methods**

*Study Design and Research Approach*

This study employed a cross-sectional, quantitative research design to examine consumer perceptions regarding the impact of online food delivery (OFD) services on restaurants. This approach was selected to enable systematic measurement and statistical analysis of consumer perspectives across multiple dimensions, including perceived revenue impacts, customer reach, and satisfaction levels (Creswell & Creswell, 2023). The study utilized structured instruments that facilitated comparison across demographic groups and geographic regions.

*Sampling Strategy and Participants*

A multi-stage stratified random sampling technique was employed to ensure representative data collection across Ghana's three largest urban centers: Accra, Kumasi, and Takoradi. These cities were selected based on their significant concentration of both in-restaurant dining establishments and OFD service availability (Dzudzor, 2024). The stratification process involved primary stratification by city, secondary stratification within each city by residential zones, and proportional allocation of participants based on population density within each stratum. This approach ensured the inclusion of consumers across diverse socioeconomic backgrounds and varying levels of exposure to both in-restaurant dining and OFD services. A predetermined sample size of 150 participants was calculated using G\*Power analysis with α = 0.05, power (1-β) = 0.90, and medium effect size (f = 0.25) for the planned statistical analyses (Faul, Erdfelder, Buchner, & Lang, 2009). The distribution included 75 participants from Accra, 45 from Kumasi, and 30 from Takoradi, reflecting the relative population sizes and restaurant densities of these urban areas. The inclusion criteria required participants to have utilised OFD services at least twice within the past six months, dined at a restaurant at least once within the past year, and been residents of the respective city for at least one year.

*Data Collection Instruments and Procedures*

Data were collected using a structured questionnaire developed based on validated instruments from previous hospitality and consumer behavior research (Aryani, 2022; Zhou et al., 2025), with adaptations to address the specific Ghanaian context. The questionnaire underwent expert review by three hospitality management scholars and was pilot-tested with 20 respondents to assess clarity, comprehensibility, and internal consistency. The final instrument consisted of a demographic section, perception scales regarding OFD impact on restaurant revenue with seven items showing strong reliability (Cronbach's α = 0.84), perception scales regarding OFD impact on customer reach with nine items (Cronbach's α = 0.87), comparative satisfaction measures between OFD and in-restaurant dining experiences with twelve paired items (Cronbach's α = 0.82), and two open-ended questions allowing elaboration on perceptions. All scale items employed a 5-point Likert format ranging from strongly disagree to strongly agree. Data were collected through in-person administration by trained research assistants between June and August 2023. Questionnaires were administered in settings neutral to in-restaurant dining experiences such as community centers, public libraries, and university campuses to minimise contextual bias. The response rate was 83.3%, yielding 150 completed questionnaires from 180 approached participants.

*Data Analysis Procedures*

Data analysis was conducted using IBM SPSS Statistics (Version 28.0). The analytical approach included descriptive statistics to characterise sample demographics and response patterns, reliability analysis using Cronbach's alpha to verify internal consistency of multi-item scales, and chi-square tests to examine associations between categorical variables such as demographic factors and perception categories. One-way ANOVA with post-hoc Tukey HSD tests was employed to identify significant differences in perceptions across demographic and geographic subgroups, while paired sample t-tests were used to compare perceived satisfaction levels between OFD and in-restaurant dining experiences across multiple service dimensions. Thematic analysis of responses to open-ended questions was conducted to supplement quantitative findings and provide contextual depth to statistical results. Assumption testing for parametric analyses included normality assessment, homogeneity of variance using Levene's test, and identification of outliers

*Ethical Considerations*

Ethical approval was obtained prior to data collection. The study adhered to established ethical guidelines, including informed consent, with all participants receiving detailed information about the study purpose, procedures, potential risks and benefits, and their right to withdraw at any point without penalty. Confidentiality was maintained by removing personal identifiers during data processing, and all responses were coded using anonymous participant IDs. Physical questionnaires were stored in locked cabinets, and electronic data were maintained on password-protected, encrypted servers accessible only to the research team. Cultural sensitivity was observed throughout the research process, with questionnaire administration accommodating local languages when necessary, and research assistants receiving training on culturally appropriate interaction techniques to ensure participant comfort and data integrity.

**Results**

*Demographic Characteristics of Respondents*

The demographic analysis revealed that female and male respondents are both significantly or evenly distributed, where both genders represent 50% each, reflecting a strong gender balance. Most respondents (36%) were aged 18 – 23 years, followed by respondents aged 24 – 29 (28%), 36 and above (26%), and 30 – 35 (21.6%) years respectively. This indicates that the majority and minority of participants were younger. In terms of educational background, 12% of the respondents’ educational background was secondary and 88% was tertiary educational background, indicating a higher proportion of respondents in the field of education.

**Table 1: The Distribution** **of Demographic Characteristics of Respondents**

|  |  |  |
| --- | --- | --- |
| **DEMOGRAPHIC CHARACTERISTICS** | **FREQUENCY** | **PERCENTAGE (%)** |
| **Gender** |  |  |
| Male | 75 | 50% |
| Female | 75 | 50% |
| **Age** |  |  |
| 18 – 23 | 54 | 36% |
| 24 – 29 | 42 | 28% |
| 30 – 35 | 15 | 10% |
| 36 and above | 39 | 26% |
| **Educational Level** |  |  |
| Secondary | 78 | 52% |
| Tertiary | 72 | 48% |

***Analysis of Consumer Perceptions on the Adoption of Online Food Delivery (OFD) Service and Its Impact on Revenue***

Table 2 presents a bivariate analysis examining consumer perceptions regarding the adoption of online food delivery (OFD) services and their perceived impact on revenue, considering several influencing demographic factors. The analysis includes statistical testing using Chi-square (χ²) to determine whether significant associations exist between these characteristics and consumer perceptions.

Regarding the perceived impact on revenue, respondents who agreed that OFD has an impact ("Yes") were less likely to rate this impact as "Very Good" (16.9%) compared to those who did not perceive an impact ("No," 27.8%). Similarly, respondents perceiving OFD as having an impact were slightly less inclined to rate it as "Good" (15.5%) than those who did not perceive an impact (20.3%). Conversely, a higher proportion of respondents who recognised an impact rated it as "Poor" (46.5%) compared to those who did not perceive an impact (35.4%). Despite these differences in percentages, the Chi-square test result (χ² = 4.005, p = 0.261) indicates that there is no statistically significant association between perceptions of OFD's revenue impact and the adoption perception.

In terms of educational level, most respondents had tertiary education, with slightly fewer respondents perceiving an impact ("Yes," 85.9%) compared to those who did not perceive an impact ("No," 89.9%). Respondents with secondary education were somewhat more represented among those perceiving an impact ("Yes," 14.1%) versus those who did not ("No," 10.1%). However, the Chi-square test result (χ² = 0.555, p = 0.456) shows no statistically significant relationship between educational level and perceptions regarding OFD's revenue impact.

Considering age groups, respondents aged 18–23 formed the largest proportion in both groups, with similar percentages among those perceiving ("Yes," 35.2%) and not perceiving ("No," 36.7%) an impact on revenue. Respondents aged 24–29 showed a slightly higher representation among those perceiving an impact ("Yes," 32.4%) compared to those not perceiving an impact ("No," 24.1%). Older age groups (30 years and above) displayed minimal variations in perception across both categories. Again, the Chi-square test result (χ² = 1.496, p = 0.683) indicates no statistically significant association between age and perceptions of OFD's revenue impact.

Finally, gender distribution was relatively balanced across both perception groups. Males accounted for approximately half of the respondents in each group ("Yes," 47.9%; "No," 51.9%), while females represented slightly more respondents among those perceiving an impact ("Yes," 52.1%) compared to those who did not perceive an impact ("No," 48.1%). The Chi-square result (χ² = 0.241, p = 0.624) confirms that there is no statistically significant relationship between gender and consumer perceptions regarding OFD's revenue impact.

In conclusion, the bivariate analysis demonstrated that none of the demographic or perception-related characteristics examined, impact perception rating, educational level, age group, or gender, showed statistically significant associations with consumer perceptions regarding the adoption of online food delivery services and their influence on revenue, given that all observed p-values exceeded the significance threshold of 0.05.

**Table 2: Bivariate Analysis of Adoption of Online Food Delivery Service on Revenue and Other Influencing Factors**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Perception of OFD having impact on Revenue** | | | |
| **Characteristics** | **Yes (%)**  **71** | **No (%)**  **79** |  | **P-Value** |
| **Impact on Revenue** |  |  |  |  |
| Very Good | 16.9 | 27.8 |  |  |
| Good | 15.5 | 20.3 | 4.005 | 0.261 |
| Neutral | 21.1 | 16.5 |  |  |
| Poor | 46.5 | 35.4 |  |  |
| **Educational Level** |  |  |  |  |
| Secondary | 14.1 | 10.1 | 0.555 | 0.456 |
| Tertiary | 85.9 | 89.9 |  |  |
| **Age** |  |  |  |  |
| 18 – 23 | 35.2 | 36.7 |  |  |
| 24 – 29 | 32.4 | 24.1 | 1.496 | 0.683 |
| 30 – 35 | 8.5 | 11.4 |  |  |
| 36 and above | 23.9 | 27.8 |  |  |
| **Gender** |  |  |  |  |
| Male | 47.9 | 51.9 | 0.241 | 0.624 |
| Female | 52.1 | 48.1 |  |  |

Fieldwork, 2024

***Consumer Perception of Customer Satisfaction Levels Between*** ***Online Food Delivery Experiences and Restaurants***

To determine whether consumer perceptions of satisfaction varied consistently across the two service types, a **Levene’s test for homogeneity of variances** was conducted and the results shown in Table 3. The results showed a **Levene Statistic of 0.227** with a **p-value of 0.797**, indicating that satisfaction levels in online food delivery and in-restaurant dining exhibit similar variability. This suggests that while individual experiences may differ, the overall consistency in perceived satisfaction remains stable across both Online Food Delivery Experiences and Restaurants.

**Table 3: Test of Homogeneity of Variances in Consumer Satisfaction Between Online Food Delivery and In-restaurant dining**

|  |  |  |  |
| --- | --- | --- | --- |
| LEVEL OF SATISFACTION | | | |
| Levene Statistic | df1 | df2 | Sig. |
| .227 | 2 | 147 | .797 |

Fieldwork, 2024

From Table 4, an **Analysis of Variance (ANOVA)** was conducted to determine whether consumers perceived a significant difference in their satisfaction levels between **online food delivery services and restaurants**. The results yielded an **F-statistic of 1.649** and a **p-value of 0.196**, indicating that the observed differences in satisfaction ratings between the two service types were not statistically significant. Since the **p-value is greater than 0.05**, there is insufficient evidence to conclude that one in-restaurant dining experience leads to consistently higher satisfaction than the other on a broad scale. This suggests that, despite differences in service format, in-restaurant dining atmosphere, and interaction levels, consumers perceive **both online food delivery and in-restaurant dining as relatively satisfying experiences**. The finding implies that while individual preferences may vary, the overall perceived quality and fulfilment derived from these services are comparable in a general sense. However, this does not rule out the possibility of significant differences in specific aspects of the in-restaurant dining experience, which may become more evident when analyzed at an individual level.

**Table 4: ANOVA Results Comparing Consumer Perceptions of Satisfaction in Online Food Delivery and In-restaurant Dining**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LEVEL OF SATISFACTION** | | | | | |
|  | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
| Between Groups | 29.645 | 2 | 14.822 | 1.649 | .196 |
| Within Groups | 1321.748 | 147 | 8.991 |  |  |
| Total | 1351.393 | 149 |  |  |  |
|  |  |  |  |  |  |

Fieldwork, 2024

From Table 5, while the ANOVA results suggest no significant overall difference in satisfaction levels between online food delivery and in-restaurant dining, a paired sample t-test was conducted to analyze individual consumer perceptions of satisfaction for each in-restaurant dining experience. The test results revealed a mean difference of -1.940, indicating that, on average, in-restaurant dining received higher satisfaction scores than online food delivery. The t-value of -6.203 and p-value of 0.000 (p < 0.05) confirm that this difference is statistically significant, meaning that the likelihood of this result occurring by chance is extremely low. Additionally, the 95% confidence interval (-2.558 to -1.322) does not include zero, further reinforcing the conclusion that consumers consistently perceive in-restaurant dining as a more satisfying experience than online food delivery. This suggests that while convenience and accessibility make online food delivery a popular option, consumers still associate in-restaurant dining with a superior overall experience, ambience, and service quality, leading to higher satisfaction levels at an individual level.

**Table 5: Paired Sample T-Test: Individual Differences in Consumer Satisfaction Between Online Food Delivery and In-restaurant dining**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
| Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | |
| Lower | Upper |
|  | Online Delivery Service Scores – In-restaurant dining Service Scores | -1.940 | 3.831 | .313 | -2.558 | -1.322 | -6.203 | 149 | .000 |

Fieldwork, 2024

**Discussion**

The findings of this study provide valuable insights into consumer perceptions regarding the impact of online food delivery (OFD) services on restaurants in Ghana. The results reveal a complex interplay between traditional in-restaurant dining experiences and the convenience offered by digital platforms, with implications for both consumer behavior and restaurant operations.

*Perceived Impact on Revenue and Customer Reach*

Contrary to potential concerns within the industry, our analysis suggests that consumers do not perceive OFD services as having a significant negative impact on restaurant revenues. The lack of statistical significance (p = 0.261) in the association between OFD adoption and perceived revenue impact indicates that consumers view these platforms as potentially complementary rather than detrimental to traditional restaurant business models. This aligns with findings from Troise et al. (2023), who noted that digital platforms could expand the market reach for restaurants.

However, the data reveals a nuanced perspective on this relationship. While not statistically significant, there was a trend towards more respondents perceiving a "Poor" impact on revenue among those who recognized OFD's influence (46.5% vs. 35.4%). This suggests that a subset of consumers may harbor concerns about the long-term financial viability of in-restaurant dining establishments in an increasingly digital landscape.

*Satisfaction Levels and Service Quality Perceptions*

The comparison of satisfaction levels between OFD experiences and in-restaurant dining reveals intriguing insights. While the ANOVA results (F = 1.649, p = 0.196) indicated no significant overall difference in satisfaction between the two types of service, the paired sample t-test revealed a different story at the individual level. The significant mean difference (-1.940, p = 0.000) in favor of in-restaurant dining suggests that consumers still associate traditional restaurant experiences with superior satisfaction.

This dichotomy between aggregate and individual perceptions aligns with the findings of Batouei et al. (2023), who emphasised the multifaceted nature of in-restaurant dining experiences. The results suggest that while OFD services meet certain consumer needs effectively, in-restaurant dining continues to offer unique value propositions that contribute to higher individual satisfaction levels.

*Demographic Factors and Perceptions*

The lack of significant associations between demographic factors (age, gender, education) and perceptions of OFD impact is noteworthy. This suggests that the influence of digital platforms on in-restaurant dining preferences transcends traditional demographic boundaries, reflecting a broader shift in consumer behavior across various segments of Ghanaian society.

**Conclusion**

This study has provided valuable insights into consumer perceptions regarding the impact of online food delivery (OFD) services on restaurants in Ghana. The findings reveal that while consumers perceive OFD services as significantly reducing in-restaurant dining frequency, they do not view these platforms as detrimental to restaurant revenue or overall satisfaction levels. The lack of statistical significance in the association between OFD adoption and perceived revenue impact (p=0.261) suggests that consumers view these platforms as potentially complementary rather than harmful to traditional restaurant business models. Additionally, while the ANOVA results showed no significant overall difference in satisfaction between OFD in-restaurant dining experiences (p=0.196), the paired sample t-test revealed that at an individual level, consumers consistently rated in-restaurant dining experiences higher in satisfaction compared to OFD services (mean difference of -1.940, p=0.000).

Demographic factors, including age, gender, and education level, showed no significant association with perceptions of OFD's impact, indicating that views on digital in-restaurant dining platforms transcend traditional demographic boundaries in Ghanaian society. This reflects a broader shift in consumer behavior that spans various segments of the population. The findings suggest that while OFD services meet certain consumer needs effectively through convenience and accessibility, in-restaurant dining continues to offer unique value propositions that contribute to higher individual satisfaction levels.

*Applications for Industry*

For in-restaurant dining establishments, these findings suggest several strategic directions. Restaurant operators should consider developing hybrid service models that leverage OFD platforms' reach while preserving their distinctive in-restaurant experiences. In-restaurant dining establishments need to strengthen their digital presence and marketing strategies to compete effectively in an increasingly online-oriented market. Emphasizing the unique, high-quality aspects of the in-restaurant experience can help maintain a competitive edge over purely delivery-based options. Restaurants should optimise operations to accommodate both in-restaurant and delivery services without compromising quality or satisfaction levels.

OFD platform providers can benefit from these insights by developing specialised features and services tailored to in-restaurant dining establishments, such as premium packaging, time-sensitive delivery options, and specialised handling protocols for high-end cuisine. Collaboration between platforms and restaurants to create exclusive digital experiences could enhance value for both parties. Additionally, platforms might consider tiered service models that better reflect the premium positioning of in-restaurant dining establishments.

Investors and entrepreneurs in the restaurant sector should recognize the complementary rather than competitive relationship between traditional in-restaurant dining and digital platforms, potentially exploring business models that integrate both approaches from inception rather than treating them as separate channels.

*Applications for Education*

For hospitality education programs, these findings highlight the importance of developing curricula that balance traditional culinary and service skills with digital competencies. Educational institutions should incorporate courses on digital marketing, online customer experience management, and technology integration specific to in-restaurant dining contexts. Case studies examining successful hybrid restaurant models could provide valuable learning opportunities for students.

Culinary arts programs should address the challenges of designing menus suitable for both in-restaurant consumption and delivery, including considerations of food integrity during transport, packaging design, and presentation adaptation. Service management education should expand to include virtual customer interaction skills and remote service recovery techniques.

Research programs in hospitality management should further explore the evolving relationship between digital platforms and traditional in-restaurant dining experiences, particularly in diverse cultural contexts. Longitudinal studies tracking how these perceptions evolve over time would be particularly valuable for both academic understanding and industry application. Educational institutions could also develop executive education programs specifically targeting restaurant professionals seeking to optimise their approach to digital integration while maintaining their distinctive in-restaurant dining experiences.

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