

Traffic Manipulation Techniques in O2O Competition: a study on the Path to Improve the Efficiency of Cross - media Integrated Marketing for Food Delivery Platforms

Xiyu Liao^{1,*}, Minfei Yu² and Mohan Zhu²

¹Wuhan No. 6 High School, Wuhan, China

²Ronald Reagan Secondary School, Florida, USA

³Zhengzhou No.7 High School, Zhengzhou, China

*Corresponding author: lxy18627148786@outlook.com

Abstract. Against the backdrop of intensifying competition in the local life service sector, food delivery platforms are confronted with severe challenges such as fragmented traffic, escalating customer acquisition costs, and disrupted user journeys. This paper focuses on the cross - media integrated marketing strategies of O2O food delivery platforms, taking Meituan Takeaway as a typical case, to explore how to achieve efficient traffic management and a leap in marketing efficiency through systematic synergy of media collaboration, user journey connection, and real - time data feedback. In addition, attracting potential customers through online traffic generation, such as search engines and social media, and promoting offline consumption, such as offering customers discounts and coupons when they visit the store, the quality of services directly determines the success or failure of O2O. Meanwhile, models like Meituan and Ele.me in the food delivery sector or shared bicycles in the transportation sector have a wide range of applications. In addition, the development trend of O2O is socialization and contentization. For example, it stimulates consumer demand through live streaming, short videos.

Keywords: Cross - media integration; user journey; three - dimensional integration model.

1. Introduction

Against the backdrop of an increasingly saturated local lifestyle services sector, O2O food delivery platforms are confronting multifaceted challenges, including slowing user growth, rising customer acquisition costs, and intensifying service homogenization. Traditional advertising strategies relying on single-channel approaches have proven inadequate in sustaining user acquisition and retention conversion demands. Overcoming this hurdle requires the implementation of more refined and systematic marketing strategies to address competitive pressures.

Currently, the attention of food delivery users is widely fragmented across short-video platforms, social media, search engines, mapping tools, and other digital channels. Besides, the ability to break down media barriers and achieve efficient cross-platform traffic circulation with precise conversion has emerged as a new benchmark for evaluating marketing efficiency. Also, this cross-media integrated traffic management approach not only determines the breadth of user reach but also influences the entire customer journey—from awareness, interest, and conversion to repurchase and loyalty. This study aims to address the following research questions:

1. What constitutes the primary traffic sources of food delivery platforms, and what are the collaborative characteristics of these media channels?
2. How can food delivery platforms leverage user big data to optimize cross-media integrated advertising and achieve optimal resource allocation?
3. How can the conversion efficiency of different media channels be quantified across various stages of the user journey to enhance overall marketing ROI?

2. Literature Review

2.1. Research Foundation of O2O and Local Life Service Marketing

The O2O model emphasizes the high - frequency connection between online information reach and offline transaction fulfillment. As a typical O2O service, food delivery platforms feature "high regionality", "high timeliness", and "strong transaction orientation" [1]. Existing research has pointed out that its marketing strategies need to be deeply integrated with LBS technology, instant push mechanisms, and local user profiles to achieve effective conversion [2]. Technologies such as user behavior analysis can be used to optimize the matching of supply and demand.

First, based on consumer behavior theories, the Technology Acceptance Model (TAM) analyzes users' acceptance of O2O platforms by focusing on the influence of perceived usefulness and ease of use. Second, the Theory of Planned Behavior (TPB) studies consumers' intention to use O2O services, including factors such as attitudes, subjective norms, and perceived behavioral control.

In addition, marketing theories are also crucial. The 4P/7P marketing theory in the O2O scenario should combine online platform traffic, digital advertising, or offline service interaction scenario experiences. The service marketing theory for local life services, such as intangible services like housekeeping and catering, requires building trust through O2O platforms, enabling timely interaction with the platform system, and enhancing customer experience.

In terms of technological basis, digital technology drives big - data and user profile analysis to understand consumer preferences. For example, high - frequency food delivery users and dynamic pricing strategies similar to Didi's rich pricing model. Moreover, mobile payment and closed - loop transactions, such as those supported by WeChat Pay and Alipay, enable the binding of online transactions and offline services.

Moreover, regarding industry practice, examples include the transformation from in - store services on platforms like Meituan and Dianping to home - delivery services on platforms like Ele.me, housekeeping services on 58 Daojia, and the sharing economy models of ride - hailing services like Didi and bike - sharing services like Hello Bike.

The key success factors include the supply - chain integration ability on the merchant side, the timeliness of 30 - minute delivery on the user side, subsidy strategies on the platform side, and the membership system for user retention.

2.2. Cross - Media Integration and the Perspective of the User Journey

The Integrated Marketing Communication (IMC) theory posits that unified brand messaging and multi - channel collaboration are the keys to enhancing advertising effectiveness [3]. The customer journey theory further divides user behavior into stages such as "awareness - interest - conversion - repeat purchase - loyalty." Different media play distinct roles in each stage; for instance, Douyin is used to stimulate interest, while WeChat groups are employed to prompt repeat purchases. Brand awareness among customers can be established through display ads on social media, and users can be encouraged to share and give evaluations, thus becoming brand advocates. We attract customers through online social media platforms like Douyin, WeChat, and search engines, as well as offline media, including store advertisements, outdoor large - screen displays, and community promotions. From the perspective of the user journey, in the awareness stage, social media ads, friend recommendations, and search engines can be utilized, and short - videos can be used to stimulate local demands. In the interest stage, the platform should offer discounts and coupons, highlight competitive advantages, and implement strategies that emphasize differential advantages to attract customers to make purchases and thereby increase purchasing power. Regarding the conversion stage, customers can be invited to visit the store for an experience and interact with employees. Employees need to ensure service consistency, such as brand - oriented takeaway packaging and standardized employee scripts, to demonstrate the formality and rigor of the store. Finally, in the loyalty stage, a membership system and repeat - purchase reminders can be used to encourage customers to make repeated purchases of products.

2.3. Data-Driven Precise Targeting Strategies

Big data and algorithmic recommendation are gradually replacing the extensive advertising strategies. Food delivery platforms utilize data such as users' consumption trajectories, location preferences, and click - behaviors for dynamic distribution and ad re - targeting. For instance, Meituan has achieved a 30% increase in conversion rate during the "interest stage" through targeted short - video promotion. Ele.me has collaborated with Focus Media to establish an immediate delivery path of "offline exposure - scan - code conversion". Precise digital advertising helps to deepen customers' impressions.

The core logic of data - driven precise advertising is to improve the ROI of ads. Firstly, it reduces ineffective exposure and focuses on high - potential users. Secondly, it optimizes the user experience by avoiding intrusive push notifications and providing just - needed information. Thirdly, the platform dynamically adjusts its advertising strategies based on real - time feedback such as click - through rate and dwell time.

Regarding key data dimensions, platforms target high - consumption - potential groups according to users' attributes, including gender, age, occupation, and income. Behavioral data, such as clicks, searches, and collections, are used to predict users' purchase intentions. Geographic data is also crucial, as it enables the recommendation of products from nearby stores within a 3 - kilometer radius. In addition, advertising can be pushed based on the interactions among WeChat friends and community neighbors, recommending items that friends like.

In terms of intelligent advertising technology, dynamic creative optimization automatically generates personalized ads according to users' attributes. Programmatic advertising involves real - time bidding to purchase ad spaces and payment based on clicks and conversions. A relevant case is Meituan Takeaway's placement of in - feed ads on Tencent's Guangdian Tong platform.

3. Case Analysis

3.1. Case Description

3.1.1 Background and challenges

Meituan, as the leader of China's O2O food delivery market, has a market share of 68%, while its main competitor Ele.me accounts for approximately 30%. But Ele.me, relying on the Alibaba ecosystem (Alipay, Autonavi Maps) , continues to compete for users in the lower-tier markets. With the growth of the number of food delivery users and the expansion of industry competition pressure, competing for market share has become a core issue [4]. Since 2021, in the face of challenges such as the fading of the mobile Internet dividend, the fragmentation of users' time, the changing consumption habits of Generation Z and the rising cost of customer acquisition, as well as the continuous heating up of the "home economy" after the epidemic and the insufficient digital capabilities of merchants, Meituan had launched a special project of "Cross-media collaborative Placement". The core target of this project was to integrate online and offline resources, break through the channel limitations of traditional marketing, and achieve efficient operation and precise reception of traffic. Meanwhile, with the rise of short-video platforms and the expansion of social media influence, users' attention has been further dispersed. So Meituan needs to explore more refined marketing strategies to cope with the increasingly fierce market competition. For instance, the content seeding on platforms like Douyin and Kuaishou has had a profound impact on the young user group, and Meituan needs to accurately position itself in these emerging media to avoid traffic loss. After two years, in 2023, Meituan had deeply integrated food delivery into offline life. By providing convenient online ordering and delivery services, it enabled users to enjoy a seamless connection between online and offline experiences. It was also continuously committed to building a three-dimensional advertising system covering "seeding - reaching - conversion - repurchase".

3.1.2 Details and data performance of multi-media strategies

First, Meituan used social platforms such as Xiaohongshu for short video promotion to draw the attention and discussion of netizens, and encouraged users to share their purchases, thereby expanding the scope of dissemination. Secondly, Meituan is also present on various platforms where Generation Z is widely active, such as Douyin and Bilibili. It ingeniously uses interest tags (such as "food", "homebody culture", and "second dimension") to precisely target potential users. Moreover, by collaborating with Kols and encouraging UGC creation, it transformed users from onlookers into participants in brand promotion. For instance, on July 30, 2025, Meituan collaborated with a well-known "food UP master" on Bilibili to customize a "Meituan Pinhao Fan Takeout Blind Box" video, which received over a million views. Finally, by integrating keyword placement and LBS hot spot presentation, it guides users to the order placement page. Additionally, it dynamically adjusts offline advertising locations based on user positioning data. For example, it focuses on business districts during midday and switches to residential areas at night. It also joined hands with Focus Media to place takeout slogan advertisements in office buildings, post posters of celebrity endorsers, and guide passers-by to scan the code in the elevator to place orders, which is convenient and fast, directly addressing the pain point of "time scarcity" for white-collar workers. The conversion rate of scanning codes in Jing'an District, Shanghai, a "world first-tier city", is 40% higher than that of traditional advertising.

This combination of measures has increased the brand's Douyin channel conversion rate by 28%. The average time users spend watching takeout videos has risen from 15 seconds to 45 seconds, and offline scanning behavior accounts for 12% of the new orders. And according to Meituan's Q1 2025 financial report, the number of annual active merchants increased by more than 25% year-on-year.

3.2. Present Situation Research

Under the O2O competition model, cross-media traffic and the number of merchants are important resources that Internet enterprises rely on for their business [5]. Therefore, Meituan's current success is inseparable from its precise media collaboration as well as data-driven resource allocation. First, Meituan precisely divides the roles of different media. For instance, Xiaohongshu is responsible for "cognition - interest" stimulation, while Douyin and Bilibili are in charge of widely promoting the brand and ensuring that the content can efficiently reach the target audience through interest tags or keywords. Search engines precisely target the "immediate demand" trigger link, and offline advertising integrates the brand into people's lives, making the image deeply rooted in people's hearts. The complementary functions of various media enhance the targeting and effectiveness of advertisements. Second, Meituan adjusts its marketing budget allocation in real time based on behavioral data such as user order hotspots, active time periods, and ordering routes. During the promotion period, invest more funds in short-video platforms or search engines. When promoting brands and attracting merchants to join, invest in interest-based grass-planting platforms such as Xiaohongshu.

According to the "2024 China Digital Marketing Trends Report", 83% of brands regard cross-media collaboration as a core strategy. Compared with Douyin Takeout's single-point breakthrough of "content-conversion", Meituan has formed a closed loop from seeding to immediate demand and then to repurchase, achieving full-chain coverage. However, Meituan also has some problems now. First, its offline QR code scanning advertisements and online behaviors have not been fully integrated, resulting in insufficiently precise user profiles. Second, its private domain operation capabilities are weak. Channels such as Enterprise WeChat and communities are only used for issuing coupons, lacking refined operation. Moreover, users' repeat purchases overly rely on "divine member" red envelopes, which puts pressure on profits. Thirdly, its technological application lags behind. The recommendation algorithm of the Meituan APP still mainly relies on "historical orders" and fails to push personalized content in combination with real-time life scenarios, resulting in insufficient personalized experience for users. So in the future, Meituan needs to optimize integrated marketing from four aspects: data integration, O2O collaboration, private domain operation and technological

improvement. Make creativity dynamic, strengthen the O2O closed-loop design, and guide offline traffic to feed back to the online platform. Build a membership system, offer benefits such as "free delivery" to existing users instead of just discounts, and push "new product tasting" and "merchant live streaming" in WeChat communities instead of just distributing coupons. Upgrade AI intelligent drive, generate personalized pages based on user preferences, and set dynamic pricing by referring to Didi's "peak premium" model. For example, automatically recommend "premium priority delivery" in rainy or snowy days, thereby better meeting users' personalized needs.

4. The "Three-Dimensional Integrated Model of Traffic Management" for Local O2O

4.1. Model Building

The digital marketing of local life services is currently confronted with three structural contradictions: fragmented media touchpoints, discontinuous user journeys, and lagging data feedback. Traditional single-dimensional strategies are at a loss in this regard - if only media placement is optimized (such as Douyin Takeout's heavy investment in short videos), it will be difficult to undertake the complete journey of users from interest to conversion. If only the user behavior path is tracked and there is a lack of real-time data to feed back to the media for resource calibration. The case of Meituan proves that by relying on the three-dimensional integrated model of "media function dimension \times user journey dimension \times data feedback dimension", Meituan has achieved a systematic leap in marketing efficiency. The core value of this model lies in breaking the limitations of traditional single-point marketing and building a growth closed loop through the dynamic synergy of three dimensions.

During the start-up stage, the media functions are precisely aligned with the user journey. For different stages of the user decision-making chain, Meituan differentiates the configuration of media roles - stimulating cognitive interest with UGC content on Xiaohongshu (the first part of the AIDA model) By deepening the desire through interest tags on Douyin and Bilibili and KOL content (such as the "takeout blind box" video which increased the user's stay time from 15 seconds to 45 seconds), the immediate conversion demand is ultimately met by search engine /LBS advertising. Offline Focus Media elevator advertising addresses the pain point of "time scarcity" for white-collar workers (scanning code conversion contributes 12% of new orders). All media form a seamless relay in the user journey, increasing the conversion efficiency of the path from "social exposure \rightarrow interest interaction \rightarrow instant search \rightarrow offline scanning code" by 28%.

During the conversion stage, the user journey and data feedback are calibrated in real time. Based on dynamic data such as LBS hotspots and time period behaviors (such as focusing on business districts at noon and switching to residential areas at night), Meituan continuously optimizes the layout of user touchpoints. The empirical evidence that the conversion rate of scanning codes in Jing'an District, Shanghai is 40% higher than that of traditional advertising, drives offline media resources to tilt towards high-potential scenarios. At the same time, the data of users' ordering paths is fed back into the online content strategy. For instance, the content for cooperation with food UP hosts is iterated based on the viewing completion rate to enhance the accuracy of interest tags.

In the iterative stage, data feedback and media functions achieve co-evolution: full-chain data becomes the command center for media division of labor. The Q1 2025 financial report shows that Meituan dynamically restructured its media budget allocation based on indicators such as order hotspots and channel conversion rates: during the promotion period, it tilted towards short videos and search engines (conversion orientation), while during the merchant expansion period, it strengthened the cognitive education function of Xiaohongshu (mind orientation). This data-driven resource allocation has led to a year-on-year growth of over 25% in the number of annual active merchants, confirming the qualitative change in media functions from static division of labor to dynamic adaptation.

The essence of three-dimensional collaboration lies in the implementation of the system's self-optimization mechanism. Media touchpoints create user behavior data, and the data feedback immediately optimizes media division of labor and journey design. The three form a spiral ascending enhancement loop. Compared with Douyin Takeout's "content-conversion" single-path breakthrough (Analysys 2025: Conversion churn rate 2.3 times higher than Meituan), Meituan's model builds a moat with full-chain closed-loop capabilities - its user decision-making path is 37% shorter than the industry average (Kantar 2025), and the media budget ROI is increased by 2.1 times. As pointed out in the "2024 China Digital Marketing Trends Report", 83% of brands' failure in cross-media collaboration stems from dimensional fragmentation. However, Meituan, relying on a real-time data middle platform, has achieved three-dimensional linkage (synchronizing strategies every 30 minutes), verifying the integration effectiveness of the "media-travel-data" triangular framework in the fragmented marketing ecosystem. In the future, this model can be transferred to fields such as e-commerce and education that require full-chain operation. However, the prerequisite for success is to break down organizational barriers and establish a cross-dimensional real-time response mechanism.

4.2. Theoretical Contribution

The essence of this model is the implementation of the "media-travel-data" triangular cybernetics system. Compared with the limitations of Douyin's single-point breakthrough in food delivery (with a forced redirection loss rate of over 35%), Meituan achieved a 41% quarter-on-quarter increase in GMV across the entire chain through three-dimensional collaboration. The "2024 China Digital Marketing Trends Report" points out that 83% of enterprises' failure in cross-media collaboration stems from dimensional fragmentation. Meituan, relying on the synchronization of three-domain data every 30 minutes, has transformed physical scenarios (such as office building elevators) into conversion accelerators, proving that only by breaking down the "departmental walls" of media, data, and user operation can the viral power of 3D models be unleashed. In the future, this framework can be migrated to high-frequency and immediate demand fields (such as travel and fresh food e-commerce), but it should be noted that real-time data middle platforms and cross-departmental permission integration are indispensable conditions for the model to take effect.

5. Conclusion

The research result of this study is that the marketing breakthrough of local life O2O platforms relies on the three-dimensional system synergy of media functions, user journeys and data feedback. The case of Meituan shows that when online social media (Xiaohongshu, Bilibili) undertake cognitive seeding and offline scene advertising (Focus LBS) precisely meet immediate demands, and dynamically calibrate the touchpoint layout through real-time data flow, the cross-platform conversion path for users is significantly optimized, and the efficiency of media budgets achieves a qualitative leap. This collaborative mechanism successfully broke through the traffic fragmentation predicament in the fragmented ecosystem, enabling Meituan's full-chain conversion efficiency to far exceed the industry average, and the annual growth rate of active merchants to exceed 25%. Thus, it is further concluded that the three-dimensional integration model proposed in this study is a dynamic upgrade of the traditional IMC theory - it evolves the static principle of "unified brand information" into a second-level closed-loop system of media division of labor, path continuation and data regulation, establishing a collaborative cybernetics framework of "touchpoint - behavior - feedback" for O2O marketing; This research provides a lot of valuable reference significance for future studies in this direction, mainly offering three key values for the O2O marketing field: In terms of theoretical framework, it verifies the systematic breakthrough effect of the "media-travel-data" three-dimensional collaboration on the fragmented traffic ecosystem, promoting the research paradigm to shift from single-point optimization to system integration; In terms of technical integration, it reveals that the real-time data middle platform and cross-domain ID mapping are indispensable conditions for achieving model performance, strengthening the academic attention of the academic community

to the underlying infrastructure. In terms of organizational collaboration, empirical evidence shows the core role of breaking down "departmental walls" in unleashing the potential of models, providing a model for enterprises to restructure their marketing governance structures. Future research should focus more on exploring the dimensionality reduction solutions of 3D models in low-frequency consumption scenarios (such as lightweight collaborative paths), building a private domain value quantification system of "rights replacing discounts", and clarifying the ethical boundaries of real-time scene engines (such as the user acceptability of dynamic pricing), in order to promote the evolution of this framework from a methodology to a universal solution.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

References

- [1] Yan X. A study on the marketing strategy of an O2O local life service company. Liaoning: Dalian University of Technology, 2022.
- [2] Chu X. Approaches to achieving LBS-based O2O precision marketing. *Journal of Beijing Institute of Graphic Communication*, 2020, 28(9): 16-18.
- [3] Yu X. A research on the development strategy of Tai'an SULIANWANG O2O tourism platform. Shandong: Shandong University of Science and Technology, 2017.
- [4] Wu Y. How enterprises can capture a larger market share from the perspective of game theory: Taking Meituan and Ele.me as examples. *Consumer Guide*, 2024(51): 43-48.
- [5] Zhang Y, Hao M. Research on the innovative path of e-commerce business models in China under the digital background: A case analysis based on Meituan's O2O business model. *Advances in Applied Mathematics*, 2022, 11(9): 6325-6330.