
The Potential Effectiveness of Utilizing Google Ads Location Targeting as a Digital Promotion Strategy for Startuppreneur

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Abstract

The post-pandemic digital economy growth opens significant opportunities for culinary startuppreneurs in Indonesia; however, limited digital marketing budgets often lead to advertising budget waste. This study aims to analyze the potential utilization of Google Ads' Location Targeting feature as an efficient digital promotion strategy for a donut culinary startuppreneur in Karawaci, Tangerang City. The research employs a descriptive quantitative method with a case study approach through the comparison of Google Ads dashboard metrics before and after location radius optimization (A/B Testing). The results indicate that implementing Location Targeting within a 7 km radius from the store location significantly reduced the Cost-Per-Acquisition (CPA) from IDR 37,500 to IDR 8,050 per order (a 78.53% reduction), while simultaneously increasing the Click-Through-Rate (CTR) from 1.5% to 6.8%. The sales conversion increase from 15 to 61 orders confirms that precise geographic targeting within a logistics-relevant radius effectively eliminates advertising budget waste. It can be concluded that Google Ads Location Targeting is an essential survival and escalation strategy for budget-constrained culinary startuppreneurs, aligned with the business efficiency principles within the Sustainable Development Goals (SDG) 8 framework.

1. Introduction

The COVID-19 pandemic, which struck the globe in early 2020, has massively accelerated digital transformation across various industrial sectors, including the micro and small culinary industry in Indonesia [1]. Data from the Ministry of Cooperatives and SMEs of the Republic of Indonesia indicates that the culinary sector is one of the largest contributors to the Micro, Small, and Medium Enterprises (MSME) ecosystem, absorbing over 97% of the national workforce [2]. In the context of Sustainable Development Goal (SDG) 8 concerning Decent Work and Economic Growth, the sustainability of micro-culinary enterprises now commonly referred to as "startuppreneurs" serves as an essential indicator of inclusive and sustainable economic growth [3], [4]. Within this landscape, the term "startuppreneur" has emerged in academic discourse to denote an entrepreneur who establishes and manages a nascent venture (startup) by leveraging digital technology and innovative business models to achieve scalable growth under resource-constrained conditions [5]. Unlike conventional MSME operators who may rely predominantly on traditional market

channels, startupreneurs are characterized by their adoption of digital-first strategies including e-commerce platforms, social media marketing, and search engine advertising as primary instruments for market penetration and customer acquisition [6].

The post-pandemic era marks the rise of culinary startupreneurs who strive to integrate home-based production with digital marketing [7]. However, the transition from conventional to digital marketing is not always seamless [8]. A fundamental issue encountered by culinary startupreneurs, particularly those producing perishable foods such as donuts, is advertising budget inefficiency a phenomenon systematically documented in digital advertising literature as non-converting impression expenditure [9], wherein advertising spend fails to generate proportional conversion outcomes [10]. This phenomenon occurs when digital advertisements are distributed indiscriminately (broad targeting) without considering the geographical relevance of the audience to the characteristics of the marketed product [11].

Perishable culinary products possess intrinsic logistical constraints that distinguish them from digital products or durable goods [12]. An overly extensive delivery radius causes shipping costs via ride-hailing delivery services to become disproportionate to the product's selling price [13]. For instance, when consumers located in Tangerang view a donut advertisement from a producer in Karawaci, Tangerang, and express purchase intent, a shipping cost ranging from IDR 25,000 to IDR 40,000 for a product priced between IDR 15,000 and IDR 25,000 per box induces a massive drop-off at the conversion stage. Consequently, the advertising budget is exhausted in reaching audiences that ultimately do not convert into sales transactions [14].

Within the Search Engine Marketing (SEM) ecosystem, Google Ads provides a Location Targeting feature that enables advertisers to restrict ad impressions based on a specific geographical radius from a focal point [15]. This feature relies on Location-Based Advertising (LBA) technology, which integrates Global Positioning System (GPS) data, Internet Protocol (IP) addresses, and Wi-Fi signals to identify user positions in real-time [16] [17]. Therefore, culinary startupreneurs can precisely target advertisements exclusively to users within an efficient logistical radius. It is important to acknowledge, however, that this study's exclusive reliance on Google Ads as the advertising platform introduces an inherent platform dependency limitation. Google Ads operates within a search-intent-driven ecosystem where users actively query for products, which fundamentally differs from the passive discovery model employed by social media advertising platforms such as Meta Ads or TikTok Ads [18]. Consequently, the location targeting efficacy observed in this study may not be directly transferable to platforms operating under different algorithmic paradigms. Furthermore, the accuracy of Google's geolocation inference which relies on IP-based and Wi-Fi signal triangulation rather than precise GPS coordinates in all instances may introduce a margin of spatial imprecision that could affect targeting accuracy, particularly in densely populated urban areas where IP geolocation databases may assign approximate rather than exact user positions [19]. This platform-specific constraint is explicitly recognized as a delimitation of the present study and is further addressed in the limitations section.

Despite the recognized potential of Location-Based Advertising, a significant research gap remains in the current literature. Previous studies have extensively discussed digital marketing adoption among MSMEs in a general context or examined LBA primarily for high-value products and large retail chains [20], [21]. For instance, [22] investigated programmatic advertising among SMEs but focused predominantly on display advertising for durable goods rather than perishable food products with inherent logistical constraints. Similarly, [23] explored barriers to innovative marketing in MSMEs. However, their analysis centered on strategic decision-making frameworks without empirical evaluation of specific SEM optimization techniques such as geotargeting. In the domain of SEM, [24] conducted a systematic review of Google Ads campaign quality and performance, yet their findings did not address the unique challenges faced by hyper-local micro-enterprises marketing perishable goods within logistically constrained radii. Furthermore, while [25] provided a comprehensive review of mobile location-based advertising premises, their work remained largely conceptual and did not offer empirical evidence on the cost-efficiency impact of radius-specific targeting for low-ticket culinary products. There is, therefore, a distinct scarcity of empirical investigations

addressing the specific application of hyper-local targeting optimization for low-ticket perishable goods, where logistical constraints severely dictate conversion rates and campaign viability.

Addressing this gap, this research employs a case study of a donut culinary startuppreneur located in Tangerang City. The analytical focus is directed toward comparing advertising cost efficiency measured by Cost-Per-Acquisition (CPA) and Click-Through-Rate (CTR) metrics between pre-optimization conditions (utilizing broad targeting across the Greater Jakarta/Jabodetabek area) and post-optimization conditions (implementing Location Targeting within a 5–10 km radius of the store location). The novelty of this study lies in its empirical evaluation of radius-specific SEM optimization as a direct, practical solution to the non-converting impression expenditure paradox experienced by micro-culinary startuppreneurs in emerging markets. Consequently, this research is expected to provide both theoretical insights into micro-level digital marketing and practical contributions for similar culinary enterprises seeking to optimize their marketing budgets efficiently.

2. Research Method

This study employs a descriptive quantitative approach utilizing a case study method. The descriptive quantitative approach was selected because this research aims to numerically describe and analyze the phenomenon of digital advertising performance based on measurable metrics within the Google Ads dashboard [26]. The case study method is utilized to conduct an in-depth examination of the specific context of a single unit of analysis namely, a donut culinary startuppreneur to attain a comprehensive understanding of the dynamics surrounding the implementation of Location Targeting at the micro-enterprise scale [18]. The selection of this object was predicated on representative characteristics, specifically: (a) it is classified as a micro-enterprise with a constrained digital marketing budget; (b) it markets perishable culinary products subject to significant logistical constraints; and (c) it currently utilizes Google Ads as its primary digital marketing channel. Research data were collected by comparing metrics from the Google Ads dashboard using an A/B testing approach. The two campaign periods were conducted sequentially to avoid audience overlap and budget competition between concurrent campaigns. Period A (Broad Targeting) was executed first over a 14-day observation window, followed by Period B (Location Targeting) which was also executed over a 14-day observation window under identical daily budget allocations. A 3-day buffer interval was maintained between the two periods to neutralize any residual audience exposure effects from Period A. The total observation period thus spanned approximately 31 days. The empirical comparison was executed across the following two distinct advertising campaign periods:

- Period A: Baseline Condition (Broad Targeting): An advertising campaign employing broad targeting that encompassed the entire Greater Jakarta (Jabodetabek) region comprising Jakarta, Bogor, Depok, Tangerang, and Bekasi without any geographical radius restrictions.
- Period B: Optimized Condition (Location Targeting): An advertising campaign implementing hyper-local targeting restricted to a 7 km radius from the store's exact geographical coordinates in Karawaci, Tangerang. The selection of the 7 km radius was determined through a multi-criteria rationale grounded in both empirical evidence and logistical analysis. First, ride-hailing delivery cost data from Grab and Gojek platforms in the Tangerang metropolitan area indicate that delivery fees within a 5–7 km radius range between IDR 5,000 and IDR 12,000, which remains proportionate to the product selling price of IDR 15,000–25,000 per box. Beyond 7 km, delivery costs escalate to IDR 18,000–40,000, causing the total consumer expenditure to exceed a rational purchase threshold and inducing significant conversion drop-off. Second, the 7 km radius from Karawaci encompasses key residential and commercial zones including Cimone, Cipondoh, Tangerang Kota, Kelapa Dua, and portions of Serpong Utara, areas with high population density and established ride-hailing infrastructure. Third, this radius aligns with findings from location-based advertising literature suggesting that the optimal geofencing radius for perishable food products in urban-suburban settings typically ranges between 5–10 km, balancing sufficient audience reach with logistical cost

proportionality (Hooda & Jain, 2024; Shekhar & Kumar, 2026). An overly narrow radius (e.g., 2–3 km) would risk severely restricting the addressable market, while a broader radius (>10 km) would reintroduce the wasted ad spend problem observed in Period A.

To ensure that the location targeting configuration was the sole independent variable being evaluated, several methodological controls were implemented. First, both campaign periods utilized identical ad creatives, keywords, and daily budget allocations [27]. Second, to mitigate potential seasonality effects, both campaigns were conducted within the same calendar month, thereby controlling for seasonal demand fluctuations (e.g., holiday periods, end-of-month spending patterns, or Ramadan-related dietary shifts) that could confound the performance comparison. Third, the sequential campaign design with a 3-day buffer interval, as described above was specifically implemented to minimize audience overlap between periods; users exposed to Period A advertisements would have experienced a cooling-off period before Period B commenced, reducing the likelihood that prior ad exposure influenced subsequent click or conversion behavior. Fourth, ad scheduling (dayparting) was configured identically for both periods, with advertisements set to run continuously across all hours (24/7) to ensure temporal consistency in ad delivery. The collected data were evaluated using descriptive comparative analysis techniques supplemented by inferential statistical testing. This procedure involved comparing the values of advertising performance metrics between Period A and Period B, followed by calculating the percentage variance (change) for each variable. The interpretation of the data was conducted by cross-referencing digital advertising industry benchmarks and Location-Based Advertising (LBA) theories to elucidate the observed phenomena.

3. Result and Discussions

Based on the data retrieved from the Google Ads dashboard, the performance of the advertising campaigns across both periods is presented in the following comparative table:

Table 1. Comparison of Advertising Performance Metrics: Broad Targeting vs. Location Targeting

No.	Metric	Period A (Broad Targeting)	Period B (Location Targeting)	Change (%)
1	Impressions	25.000 Impressions	8.500 Impressions	-66,00%
2	Clicks	375 Click	578 Click	+54,13%
3	CTR	1,5%	6,8%	+353,33%
4	CPC	Rp1.500	Rp850	-43,33%
5	Conversi	15 orders	61 orders	+306,67%
6	CPA	Rp37.500	Rp8.050	-78,53%

The data in Table 1 reveal a significant performance transformation across all observed metrics following the implementation of Location Targeting. Although the number of impressions decreased by 66%, all conversion performance metrics exhibited substantial improvements. To validate that the observed differences are not attributable to random variation, inferential statistical tests were conducted on the two primary performance indicators. A two-proportion z-test on Click-Through-Rate (CTR) comparing Period A (1.5%, $n = 25,000$) and Period B (6.8%, $n = 8,500$) yielded a z-statistic of 25.39 ($p < 0.001$), confirming that the CTR improvement is statistically significant at the $\alpha = 0.05$ level. Furthermore, a Pearson's chi-square test of independence was performed on the conversion outcome (converted vs. not converted) across the two campaign periods. The analysis revealed a statistically significant association between campaign type and conversion outcome, $\chi^2(1, N = 953) = 12.43, p < 0.001$. The conversion rate in Period B (10.56%, 61 out of 578 clicks) was significantly higher than in Period A (4.00%, 15 out of 375 clicks). These inferential results substantiate the descriptive findings and confirm that the performance improvements observed under Location Targeting are statistically robust rather than artifacts of sampling variability.

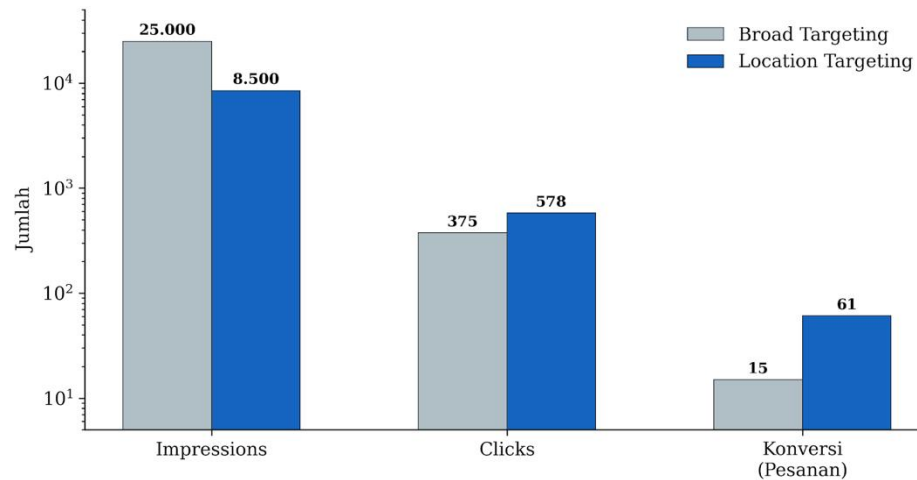


Figure 1. Comparison of Advertising Performance Metrics between Broad Targeting and Location Targeting

The increase in CTR from 1.5% in Period A to 6.8% in Period B represents a surge of 353.33%. This 6.8% CTR significantly exceeds the average food and beverage industry benchmark on Google Ads, which ranges between 2.5% and 4.0%. This phenomenon can be elucidated through the theory of relevance in Location-Based Advertising: when advertisements are delivered to audiences geographically proximate to the business location, the relevance of the advertising message to consumer needs increases exponentially [28]. In the context of this case study, audiences situated within a 7 km radius of the store location in Karawaci, Tangerang, possess characteristics functionally distinct from those outside this radius, as reflected in observable platform metrics. First, the substantially higher CTR (6.8% vs. 1.5%) suggests that geographically proximate users perceived the advertisement as more relevant to their immediate needs a behavioral pattern consistent with the proximity-relevance hypothesis in LBA literature [29]. Second, the delivery cost transparency inherent in the Indonesian ride-hailing ecosystem means that consumers within a 7 km radius would incur shipping fees of IDR 5,000 to IDR 12,000 via Grab or Gojek, which is proportionate to the product price of IDR 15,000–25,000. This cost proportionality is observable in the higher conversion rate (10.56% vs. 4.00%), indicating that fewer users abandoned the purchase funnel at the delivery cost evaluation stage. Third, geographical proximity affords the option of direct in-store pick-up, which while not directly measurable from Google Ads data alone represents a plausible contributing factor to the elevated click and conversion rates observed in Period B.

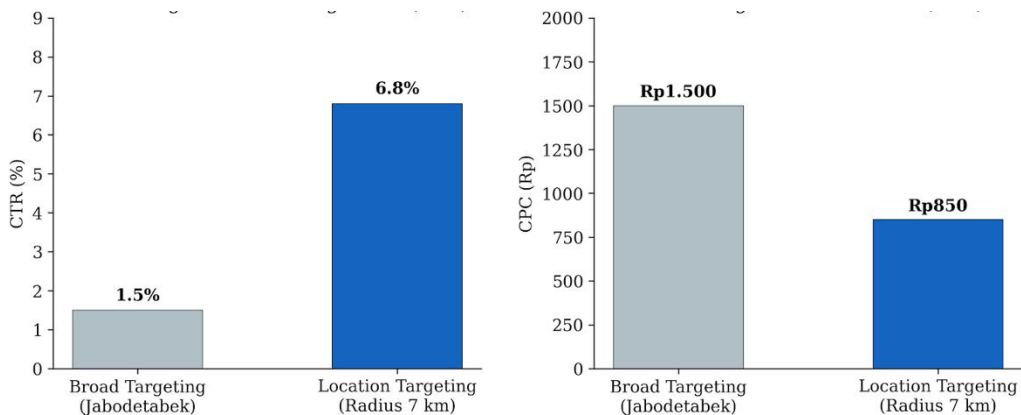


Figure 2. Comparison of Click-Through-Rate (CTR) and Cost-Per-Click (CPC)

The reduction in CPC from IDR 1,500 to IDR 850 (a decrease of 43.33%) is a direct consequence of an improved Quality Score within the Google Ads algorithm. As articulated by [30], the Quality Score is influenced by three primary factors: expected CTR, ad relevance, and landing page experience. When Location Targeting was implemented, the audiences receiving ad impressions exhibited a higher match with the offered product, thereby increasing the CTR. The Google Ads system responded by lowering the cost per click as an incentive for high campaign quality. The total advertising cost in Period A was estimated at IDR 562,500 (375 clicks × IDR 1,500), whereas in Period B, it was IDR 491,300 (578 clicks × IDR 850). Operating on a budget that was 12.66% lower, Period B conversely generated 54.13% more clicks. These findings confirm the principle of resource allocation efficiency, which serves as the foundation of competitiveness for startupreneurs.

The decrease in CPA from IDR 37,500 to IDR 8,050 per order (a decline of 78.53%) constitutes the most critical finding in this research. A CPA of IDR 37,500 in Period A reflects extreme inefficiency that jeopardizes business sustainability. Assuming the net profit margin per box of donuts ranges between IDR 8,000 and IDR 12,000, a CPA of IDR 37,500 signifies that the startupreneur incurs a net loss of IDR 25,500 to IDR 29,500 for every order acquired through advertising. This situation is unequivocally unsustainable and can be quantitatively evaluated against SDG 8 indicators. Specifically, SDG Target 8.3 promotes productive activities, decent job creation, and entrepreneurship, while SDG Indicator 8.3.1 measures the proportion of informal employment in total employment—a metric directly relevant to micro-culinary enterprises. Under Period A conditions, the negative return on advertising spend (ROAS) of approximately -213% to -368% (calculated as: $[\text{Revenue per order} - \text{CPA} - \text{COGS}] / \text{CPA}$) renders the business model economically nonviable, effectively precluding the startupreneur from sustaining employment including self-employment through digital commerce. In contrast, under Period B conditions, the positive unit economics (CPA of IDR 8,050 against a profit margin of IDR 8,000–12,000) yield a break-even to positive ROAS, enabling the startupreneur to: (a) sustain their own productive employment (contributing to SDG Indicator 8.3.1); (b) generate sufficient revenue to engage local supply chain participants such as raw material suppliers and ride-hailing couriers, thereby creating indirect employment opportunities (SDG Target 8.5); and (c) achieve a measurable increase in gross revenue from $15 \times \text{IDR } 20,000 = \text{IDR } 300,000$ (Period A) to $61 \times \text{IDR } 20,000 = \text{IDR } 1,220,000$ (Period B)—a 306.67% increase in sales volume that directly contributes to local economic output growth as conceptualized in SDG Target 8.1 regarding sustained per capita economic growth.

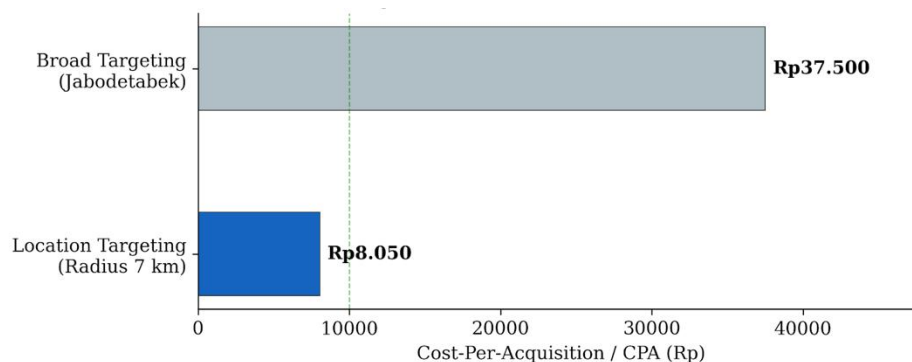


Figure 3. Comparison of Cost-Per-Acquisition (CPA) per Order

Conversely, the CPA of IDR 8,050 in Period B is well below the profit margin, ensuring that every generated order contributes positively to the business's profitability. The surge in conversions from 15 to 61 orders (an increase of 306.67%) occurred due to several integrated factors:

- First, geographical relevance and logistical costs. Audiences within a 7 km radius of the Karawaci location incur ride-hailing delivery fees ranging from IDR 5,000 to IDR 12,000. The total cost borne by the consumer (product price plus shipping cost) remains within a rational threshold.

Consequently, the drop-off rate at the payment stage is drastically reduced compared to consumers outside Tangerang City, who must bear shipping costs of IDR 25,000 to IDR 40,000.

- Second, higher behavioral engagement from proximate audiences. The conversion rate data (10.56% in Period B vs. 4.00% in Period A) indicate that audiences within the 7 km radius demonstrated substantially stronger purchase completion behavior. This pattern is consistent with proximity-driven purchase intent as documented in LBA literature, wherein shorter delivery distances estimated at 15 to 30 minutes via ride-hailing services reduce friction in the purchase decision process. While the underlying psychological mechanisms (e.g., trust, familiarity) cannot be directly inferred from Google Ads dashboard data alone, the measurable behavioral outcome a 164% increase in conversion rate provides robust empirical evidence that geographical proximity is a significant determinant of purchase completion for perishable culinary products.
- Third, the elimination of irrelevant audiences. Location Targeting effectively filters out audiences in outer Tangerang, Bogor, East Jakarta, and other areas that are logistically inefficient for receiving donut deliveries from Karawaci. This aligns with the findings of [31], who posited that the elimination of non-relevant audiences is the primary key to budget efficiency in location-based digital advertising.

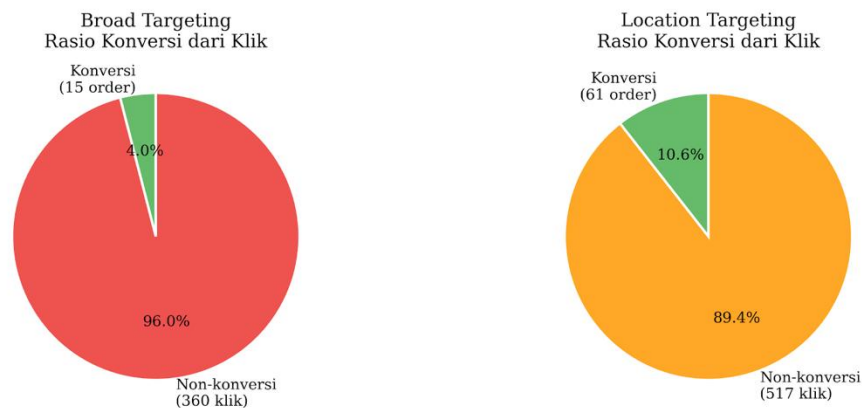


Figure 4. Conversion Rate from Total Clicks: Broad Targeting vs. Location Targeting

The findings of this study have significant strategic implications for the culinary startupreneur ecosystem in Indonesia. First, a 7 km radius has proven to be the optimal configuration that maximizes the balance between potential audience volume and conversion relevance. An overly narrow radius (e.g., 2–3 km) risks excessively restricting market reach, whereas an overly broad radius (above 10 km) begins to encompass audiences with inefficient logistical costs. Second, the implementation of Location Targeting directly contributes to the achievement of SDG 8 through three quantifiable mechanisms: (a) reducing non-converting advertising expenditure by 78.53% (CPA reduction from IDR 37,500 to IDR 8,050), thereby transforming a loss-generating business model into a financially sustainable one aligned with SDG Target 8.3 on productive entrepreneurship; (b) increasing gross revenue by 306.67% (from IDR 300,000 to IDR 1,220,000 per campaign cycle), which contributes to local economic output growth as envisioned in SDG Target 8.1; and (c) elevating the volume of local transactions, which consequently stimulates indirect employment creation for ride-hailing couriers and local raw material suppliers in the Karawaci area, consistent with SDG Target 8.5 on full and productive employment [32] [33]. Therefore, precision in digital marketing not only benefits individual entrepreneurs but also collectively stimulates measurable local economic growth.

4. Conclusions and Future Works

“Based on the results of the analysis and discussion, this study suggests that the Location Targeting feature in Google Ads may contribute positively to improving the cost efficiency of digital promotions for a donut culinary startupreneur in Karawaci, Tangerang. This efficacy is evidenced by a 78.53% decrease in CPA (from IDR 37,500 to IDR 8,050 per order) and a 353.33% increase in CTR (from 1.5% to 6.8%) following the implementation of a 7 km targeting radius from the store's location. Furthermore, the 7 km radius from Jl. Ry. Bani Arsyad, Karawaci, appeared to provide a relatively optimal configuration within the context of this case study. It successfully balances an adequate audience volume with a high degree of geographical relevance, wherein ride-hailing delivery costs remain proportionate to the product price, thereby averting a significant drop in conversions. Moreover, Location Targeting can be perceived not only as a survival strategy for culinary startupreneurs operating under budget constraints but also as a growth strategy to sustainably increase sales, which aligns with the principles of business efficiency and inclusive economic growth outlined in SDG 8. The surge in conversions from 15 to 61 orders (an increase of 306.67%) further corroborates that in the context of perishable culinary products, the geographical relevance of the audience is the primary determinant of digital advertising campaign success, superseding even the total reach.

While this study provides preliminary empirical insights into the potential efficacy of Location Targeting for micro-culinary enterprises, its findings are derived from only a single MSME case involving a donut culinary startupreneur utilizing the Google Ads network. Therefore, the results should be interpreted cautiously and cannot be generalized to all MSMEs, culinary businesses, or digital advertising contexts without further validation through broader multi-case or large-scale studies. To improve the external validity and broader applicability of the findings, future research is encouraged to incorporate multiple MSME cases across different geographical regions, business scales, and culinary sub-sectors. Additionally, subsequent studies could conduct a comparative analysis between Search Engine Marketing (SEM) and social media advertising algorithms such as Meta Ads or TikTok Ads to determine if the hyper-local targeting efficiency observed in this study remains consistent across different digital platforms. Furthermore, exploring the integration of predictive analytics or machine learning to dynamically determine the most optimal targeting radius, factoring in real-time fluctuations in ride-hailing delivery rates and localized consumer demand, would present a compelling avenue for advancing the theoretical framework of Location-Based Advertising in emerging markets.

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