

Research Article

Viral Marketing Strategy of Immigrant UMKM to Improve Competition in Urban Areas

Desti Destiansari Istinabiyah^{1*}, Octavia Rahmadhani², Siti Nurhalimah Ayudiah³

^{1,2,3}Politeknik Negeri Sriwijaya, Indonesia

*corresponding author: desti.istinabiyah@polsri.ac.id

Abstract

Article history:

Received March 18, 2025

Revised April 12, 2025

Accepted May 9, 2025

Keywords:

UMKM Immigrants, Tiktok Shop, Viral Marketing, Urban Competition, Marketplace Platforms

Micro, Small and Medium Enterprises (UMKM) are often one of the livelihoods in urban environments, namely the movement of villagers to urban areas. Therefore, this study was conducted to analyze the immigrant population facing major challenges in competing in competitive urban markets, especially with the rapid development of digital technology. Marketplace platforms on social media can expand market reach and interaction between traders and consumers, one of which is the TikTok Shop platform which is often used by all levels of society. Through the TikTok Shop platform, immigrant UMKM can increase their competitiveness in urban areas. By raising the issue of eliminating TikTok Shop at the end of 2023, which is a major challenge for some UMKM actors to create new innovations and strategies in utilizing digital technology. This research method involves literature studies and observations of UMKM that have successfully used TikTok Shop before and after the platform was removed. The results of the study show that TikTok Shop greatly influences the marketing of immigrant UMKM. Designing viral promotional innovations carried out through video content, live shopping, adding product reviews, to collaborating with major influencers. A machine learning approach is needed in the form of sentiment analysis of TikTok content comments as a viral marketing strategy in creating subsequent advertisements. Integration of digital technology and adaptability are key for immigrant UMKM to survive and compete in dynamic urban markets.

To cite this article: Istinabiyah, D.D., Rahmadhani, O., Ayudiah, S.N. 2025. Viral Marketing Strategy of Immigrant UMKM to Improve Competition in Urban Areas. *Journal of Applied Science and Engineering Management Research* 1(2):120-123.

Introduction

The migration of people to cities is caused by the need for a decent life, one of which is that economic conditions are not sufficient to meet a decent standard of living in their place of origin. Therefore, economic growth that is concentrated in urban areas motivates villagers to face the problem of economic inequality in rural areas in the hope of getting a higher income. Becoming an entrepreneur is one way to meet economic needs, but for immigrant UMKM actors to do business in urban areas, they must face the challenge of technological developments that are still

a minority in rural areas. The technological development that is usually used in business is social commerce, an example is TikTok. TikTok provides a service for posting short videos, ranging from 3 seconds to 10 minutes. TikTok is often used to promote businesses with the TikTok Shop feature which makes it easier for consumers and sellers to shop. TikTok Shop is a feature that can increase the effectiveness of advertising and product sales. Initially, TikTok Shop was created on April 17, 2021 with the aim of reconditioning the fulfillment of needs in the era of the Covid-19 Pandemic (Bakrie University, 2021).

The removal of TikTok Shop on October 4, 2023 on the basis of violating the Electronic Trading System (PMSE) regulations on a social media application was emphasized by Permendag No. 31 of 2023 (Sip Law Firm, 2023). This has caused pros and cons, referring to data from the Indonesian Ministry of Trade, TikTok Shop has $\pm 50,000$ active sellers and ± 10 million customers. However, since TikTok Shop was removed there has been a decline of up to 30% which has an impact on Indonesia's economic growth (Egsa UGM, 2023).

Rebuilding a business on a digital platform by following the development of viral marketing, reported by (PPM School, 2024) viral marketing is a marketing technique that intentionally spreads offers through messages quickly, just like a virus. This marketing affects one person to another. So that many people watch, more and more people share promotions and there is awareness of a brand that has a tremendous impact. Using social commerce or doing business with a digital platform in the form of TikTok Shop is an innovation that is currently developing rapidly. Through TikTok Shop, sellers can apply the concept of viral marketing as a promotional medium.

Viral marketing strategies through TikTok comment sentiment analysis can significantly increase consumer engagement and trust. By leveraging natural language processing (NLP) techniques such as LSTM and IndoBERTtweet, companies can classify user comments into positive, negative, or neutral sentiments, which helps in understanding the audience's perception of a product or service. For example, research by Setiawan et al. (2023) showed that the IndoBERTtweet model achieved 80% accuracy in analyzing Indonesian TikTok reviews. The results of this analysis allow brands to tailor their content, respond to feedback in real-time, and leverage positive opinions to strengthen their marketing campaigns. This approach not only increases brand visibility but also builds a more authentic and responsive relationship with consumers.

Materials and Methods

The Cross-Industry Standard Process for Data Mining (CRIPS-DM) methodology is a standard framework widely used in data mining projects, consisting of six iterative phases: Business Understanding, Data Understanding, Data Preparation, Modeling, Evaluation, and Deployment. In this study, CRISP-DM was applied to analyze TikTok comment data to identify user sentiment towards a product or service. This research was conducted at the Sriwijaya State Polytechnic (POLSRI), Informatics Management Department, Jalan Sungai Sahang No.3654, Lorok Pakjo, Ilir Barat I District, Palembang City, South Sumatra 30151. The reason the researcher chose this location was because it was affordable and the researcher wanted to know how the UMKM

innovation by the perpetrator as a POLSRI student from Tanjung Enim Regency, South Sumatra. In addition, the researcher also wanted to know the response of a POLSRI student as a consumer on TikTok Shop. The process begins with understanding the business objectives, followed by collecting and exploring TikTok comment data. The data is then prepared for sentiment analysis using natural language processing (NLP) techniques. Sentiment models are built and evaluated to ensure the accuracy and relevance of the results. The analysis results are used to design marketing strategies that are responsive to user opinions, with the aim of increasing customer engagement and loyalty.

Results

This study focuses on the impact of the removal of the TikTok Shop feature on immigrant UMKM, the influence of viral marketing, innovation strategies of immigrant UMKM, and transaction technology to increase competition in urban areas. This study involved two people as sources for problem solving, one of which used resources in the form of TikTok Shop as a producer and consumer. The data will be qualified for its truth and determination by the sources. The sources involved in this study were a fourth-semester student, Sriwijaya State Polytechnic, D-IV (Diploma Four) study program or Applied Bachelor of Informatics Management, Informatics Management Department named Zakira Surani who built a business on the TikTok Shop platform as a reseller. In addition, Zakira also applies viral marketing and digital transactions to her consumers. Next is Zifa Amelia Cahyanti, a second-semester student, Informatics Management Department, D-III (Diploma Three) Informatics Management study program, Sriwijaya State Polytechnic, as a consumer using TikTok Shop and digital transactions.

Based on the results of the interview on March 3 and March 4, 2025, it can be concluded that the four problems above are interrelated. "The impact of TikTok Shop has a big impact on my business, such as the loss of consumers which has decreased income." Zakira said about the impact of the removal of TikTok Shop. Likewise, consumers experienced it, Zifa said that she found it difficult to find the products she found on TikTok Shop and did not get big discounts like on TikTok Shop.

Furthermore, Zakira revealed that with viral marketing techniques through making creative videos and uploading them on social media, it can increase product sales ratings. As a strategy in product sales innovation, Zakira uploads promotional videos consistently, which is once a week and plans to endorse a partner for her business.

Discussion

In this study, data absorption or data crawling was carried out using the TikTok API. Data absorption was carried out to determine the sentiment analysis of product advertising content. By using the XGBoost method and hyperparameters, a classification of neutral, negative and positive sentiments was obtained with an accuracy of 98%. Positive comments are used as a reference for creating a viral marketing strategy.

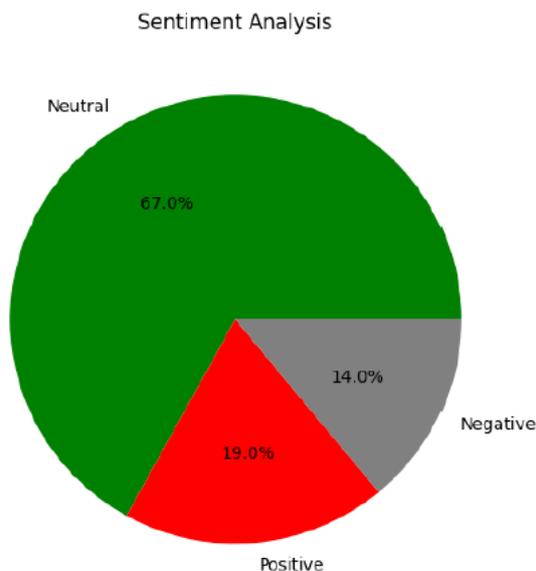


Figure 1. Sentiment Analysis of a random sample of TikTok advertising videos

The results of the sentiment analysis above show that the TikTok comments on the viral product advertisement sample have a negative sentiment of 14.0%, followed by a positive sentiment of 19.0%, and a neutral sentiment that dominates at 67.0%. Based on these values, it can be concluded that positive sentiment is higher than negative sentiment.

Utilizing viral marketing, UMKM can reduce marketing costs because the dissemination of information is carried out by consumers voluntarily. Viral content often encourages interactions, such as comments, likes, and shares, which can increase consumer engagement with the brand. Through viral marketing, UMKM can compete with larger companies because of the potential for wide and fast reach. This allows UMKM to gain a larger market share.

Conclusion

Immigrant UMKM can utilize TikTok Shop to compete to maintain their business. TikTok also has several features that can be utilized as a product marketing strategy, such as the for your page feature which functions to display creative videos containing viral marketing strategies designed with an AI

approach, namely conducting TikTok comment sentiment analysis, utilizing live streaming features, comment features, and sharing features that strengthen interaction between producers and consumers. The TikTok comment sentiment analysis prototype uses the XGBoost method with hyperparameter tuning, XGBoost parameter tuning combines several weak learner sets (trees) into a strong model to produce strong predictions. The tuning parameters used are learning_rate or the learning rate carried out by the XGBoost algorithm of 0.1, n_estimators created by the classifier of 888, max_depth or maximum tree depth of 10. The prototype produces an accuracy of 98%.

References

- Agrawal, E. (2023). Going Viral: An Analysis of Advertising of Technology Products on TikTok. arXiv preprint arXiv:2402.00010. <https://arxiv.org/abs/2402.00010>
- Baccarini, D. (2024). The logical framework approach. In *Project Management Journal*, 55(2), 92-105. <https://doi.org/10.1177/87569728231200599>
- Bannerman, P. L. (2023). Risk management practices in global projects: Trends and challenges. *International Journal of Project Management*, 42(2), 87-99. <https://doi.org/10.1016/j.ijproman.2023.10.008>
- Cortis, K., & Davis, B. (2020). Over a Decade of Social Opinion Mining: A Systematic Review. arXiv preprint arXiv:2012.03091. <https://arxiv.org/abs/2012.03091>
- Geraldi, J., & Söderlund, J. (2023). Projects as experiments: A venture creation perspective. *International Journal of Project Management*, 42(5), 389-401. <https://doi.org/10.1016/j.ijproman.2023.07.012>
- Gido, J., & Clements, J. (2023). *Successful project management*. Cengage Learning.
- Hobbs, B., & Aubry, M. (2023). The project management office (PMO): A contemporary view. *Project Management Journal*, 54(4), 355-367. <https://doi.org/10.1177/87569728221121543>
- Ika, L. A. (2023). Project success as stakeholder perception: A realist perspective. *International Journal of Project Management*, 41(7), 621-633. <https://doi.org/10.1016/j.ijproman.2023.06.015>
- Jendoubi, S., & Martin, A. (2019). Evidential positive opinion influence measures for viral marketing. arXiv preprint arXiv:1907.05028. <https://arxiv.org/abs/1907.05028>
- Joslin, R., & Müller, R. (2023). The impact of project governance on project success: A structured literature review. *International Journal of Project Management*, 41(5), 450-462. <https://doi.org/10.1016/j.ijproman.2023.04.009>
- Jugdev, K., & Müller, R. (2024). A retrospective look at our evolving understanding of project success. *International Journal of Project Management*, 42(6), 593-605. <https://doi.org/10.1016/j.ijproman.2023.12.011>
- Kerzner, H. (2024). *Project management metrics, KPIs, and dashboards: A guide to measuring and monitoring project performance*. Wiley.
- Kerzner, H., & Saladis, F. P. (2023). *Project management: A*

- systems approach to planning, scheduling, and controlling. Wiley.
- Killen, C. P., & Jugdev, K. (2023). Project management research: Achievements and opportunities. *International Journal of Project Management*, 41(6), 479-491.
<https://doi.org/10.1016/j.ijproman.2023.05.012>
- Kloppenborg, T. J., Anantmula, V., & Wells, K. (2024). *Contemporary project management*. Cengage Learning.
- Lechler, T., & Doolen, T. L. (2024). Agile project management in complex environments: The role of leadership and culture. *Project Management Journal*, 55(2), 112-126.
<https://doi.org/10.1177/87569728231200598>
- Levine, H. A. (2024). *Practical project management: Tips and techniques*. Pearson.
- Lock, D. (2023). *Project management*. Gower Publishing Limited.
- Martinsuo, M., & Killen, C. P. (2024). Value management in projects: A systematic literature review. *Project Management Journal*, 55(1), 12-29.
<https://doi.org/10.1177/87569728231231541>
- Maylor, H., Vidgen, R., & Carver, S. (2023). Managerial complexity in project environments: Some implications. *Project Management Journal*, 54(1), 22-36. <https://doi.org/10.1177/87569728221121542>
- Meredith, J. R., & Mantel, S. J. (2023). *Project management: A managerial approach*. Wiley.
- Müller, R., & Turner, J. R. (2024). Leadership competency profiles of successful project managers. *International Journal of Project Management*, 42(7), 735-742.
<https://doi.org/10.1016/j.ijproman.2023.10.018>
- Pilkington, A., & Meredith, J. R. (2023). Strategic project management: The evolution of a discipline. *International Journal of Project Management*, 41(3), 157-169.
<https://doi.org/10.1016/j.ijproman.2023.01.006>
- Shenhar, A. J., & Dvir, D. (2024). Reinventing project management: The diamond approach to successful growth and innovation. *International Journal of Project Management*, 42(1), 45-60.
<https://doi.org/10.1016/j.ijproman.2023.09.004>
- Söderlund, J. (2024). *Project management discipline: Theory and practice*. Routledge.
- Turner, J. R. (2024). *Handbook of project-based management: Leading strategic change in organizations*. McGraw-Hill Education.
- Turner, J. R., & Muller, R. (2023). The project manager's leadership style as a success factor on projects: A literature review. *International Journal of Project Management*, 41(2), 124-138.
<https://doi.org/10.1016/j.ijproman.2022.11.005>
- Turner, R., & Cochrane, R. A. (2023). Goals-and-methods matrix: Coping with projects with ill-defined goals and/or methods of achieving them. *International Journal of Project Management*, 42(4), 555-561.
<https://doi.org/10.1016/j.ijproman.2023.06.010>
- Ward, S., & Chapman, C. (2023). *Benefits management: Delivering value from your projects*. Wiley.
- Winter, M., Smith, C., Morris, P., & Cicmil, S. (2023). Rethinking project success. *International Journal of Project Management*, 42(3), 204-215.
<https://doi.org/10.1016/j.ijproman.2023.05.003>
- Zwikael, O., & Smyrk, J. (2023). Project governance: Balancing control and flexibility. *International Journal of Project Management*, 41(4), 344-356.
<https://doi.org/10.1016/j.ijproman.2023.03.007>
- Zwikael, O., Meredith, J. R., & Peter, G. (2024). Aligning project management with organizational strategy. *Journal of Business Research*, 154, 113-123.
<https://doi.org/10.1016/j.jbusres.2023.12.014>