Digital Innovation : International Journal of Management

E-ISSN: 3047-9053
P-ISSN: 3047-9681

Research Article

Micro-Shopping and Omnichannel Adoption: Evidence on Market Structure and Competition in Indonesia Retail Ecosystem

Ossi Ferli [1*], Adelya Vasya Maharani [2]

[1] Sekolah Perbankan STIE Indonesia; e-mail: ossi.ferli@ibs.ac.id
[2] Sekolah Perbankan STIE Indonesia; e-mail: adelya.20221111046@ibs.ac.id
* Corresponding Author: ossi.ferli@ibs.ac.id

Abstract: This study examines the implications of the *micro-shopping* phenomenon and *omnichannel* integration for market structure and competitive dynamics in Indonesia's retail sector from an industrial organization perspective. The transformation of modern retail is characterized by a shift toward small-value, high-frequency transactions alongside increasing integration between physical stores and digital channels. Employing a descriptive-analytical approach, this study utilizes secondary data on market shares and the number of retail outlets operated by major firms during the 2022–2024 period. Market structure is assessed through market share distribution, outlet ownership ratios, the four-firm concentration ratio (CR4), and the Herfindahl–Hirschman Index (HHI). The results indicate that Indonesia's retail market exhibits a highly concentrated, network-based oligopolistic structure. The dominance of large retail firms is reflected not only in their substantial market shares but also in their dense outlet networks, which enable the aggregation of dispersed *micro-shopping* transactions. Furthermore, *omnichannel* integration reinforces these structural advantages by enhancing logistical coordination and distribution efficiency. Overall, the findings suggest an increasing tendency toward market consolidation and a declining competitive space for small and traditional retailers, highlighting important implications for competition policy and the long-term sustainability of retail market structure.

Keywords: Industrial Organization; Market Structure; Micro-Shopping; Omnichannel; Retail Competition.

Received: July 26, 2025
Revised: September 28, 2025
Accepted: December 01, 2025
Published: January 27, 2026
Curr. Ver.: January 27, 2026

1. Introduction

The global retail sector is currently undergoing a significant structural reconfiguration. This transformation is marked bya a shift away from the domninance of traditional retail formats toward a diversified portofolio of segmented modern retail formats. Under this condition, retail demand is increasingly distributed across a broader spectrum of formats, including minimarkets, supermarkets, discounters, convenience stores, and mass merchendisers (Franco et al., 2025). Differences in the characteristic of these formats reflect substantial variation in key retail mix elements, including location, store size, and the depth and breadth of product assortments (Sopang, 2021). Such differentiation contributes to the fragmentation of demand and transactional structures, which subsequently generates more heterogeneous shopping experiences and consumer decision-making processes (Costa, 2025). This development encourages the redistribution of retail activities and expenditures across formats, reinforcing multi-format shopping behavior and reshaping the configuration of retail market competition (Amory et al.m 2025).

The micto-shopping phenomenon refers to retail transaction patterns characterized by relatively small purchase oriented toward short-term needs fulfillment (Achmad et al., 2023). Within this pattern, retail expenditures exhibit a declining concentration of large-scale transactions within a single period and instead become distributed across recurrent low-value transactions (Amri et al., 2024). This condition elevates store network density and operational scale as critical factors in capturing aggregated small-value transactions, thereby strengthening the competitibe advantages of retail firms operating extensive store networks.

As stransaction dispersion and purchase frequency increase, omnichannel strategies have evolved as an economic system that enables coordination across multiple retail distribution channels (Cahyani et al., 2025). In contrast to multichannel approaches that operate through separate channels, omnichannel strategies emphasize operational integration between physical stores and digital platforms (kembau & Setiawan, 2024), particularly in inventory management and logistics distribution. Such integration functions to reduce coordination costs and enhance efficiency in fulfilling recurent and spatially dispersed retail demand, therby reinforcing retailers' capacity to accumulate small-value transactions at an aggregate level.

These structural changes in competition hold particular relevance within the Indonesian retail market, which is characterized by the coexistence of nationally scaled modern retail chains and small-sclae traditional retailers (Fitriyani, 2021). The expansion od modern minimarkets with high network desnity, combined with the adoption of digital platform-based services, has significantly altered retail competition models. Disparities in the dominance of large retail networks, whole traditional retailers continue to face structural pressures in maintaining competitivenes. Also, despite the rapid growth of retail literature, studies that position micro-shopping behavior and retail compeition remain limited. Existing research has primarily focused on consumer behavior and marketing performance, leaving the industrial economic implications of these phenomenon is insufficiently examined. Accordingly, this study aims to analyze how micro-shopping patterns and omnichannel integration influence market structure and competitive dynamices within the Indonesian retail sector. The findings are expected to contribute to the theoretical development of retail industrial economics and to inform competitive policy considerations and sustainable retail sector development.

2. Literature Review

Network Based Competition Through Outlet Density and Distribution Networks

The transformation of the retail sector has become a central theme in industrial organization research, as evolving consumption patterns and distribution technologies fundamentally reshape market structure and competitive dynamics. Classical industrial organization theory emphasizes that market outcomes are largely determined by structural conditions such as market concentration, firm scale, and eyanntry barriers, rather than firm conduct alone (Tirole, 1988). Within this tradition, the Structure–Conduct–Performance (SCP) framewor**k** remains a foundational analytical tool for examining how structural changes translate into persistent differences in competitive intensity and firm dominance (Chen & Yan., 2025)).

In retail industries, structural transformation is closely associated with changes in demand organization and distribution architecture. The expansion of modern retail formats, including minimarkets, convenience stores, supermarkets, and digitally integrated platforms, has altered the spatial and organizational structure of retail markets. Prior research emphasizes that retail competition increasingly operates through network scale and distribution efficiency, rather than through isolated price competition or product differentiation (Zhang et al., 2025). Firms with extensive outlet networks are able to internalize spatially dispersed demand, exploit economies of scale in logistics, and coordinate supply more efficiently, thereby strengthening their structural position within the market.

Recent literature further suggests that contemporary retail markets exhibit characteristics of network-based oligopoly, in which market power is derived from control over interconnected physical and digital distribution systems (Tokaman et al., 2022). In such markets, scale

advantages are cumulative: dense outlet networks facilitate demand aggregation, while integrated distribution systems reduce marginal coordination costs. These mechanisms jointly contribute to increasing market concentration and rising barriers to entry, particularly for small and traditional retailers that lack comparable network and coordination capabilities. From an industrial organization perspective, these developments imply that retail transformation should be analyzed as a structural process, rather than as a series of firm-level strategic choices. Changes in transaction patterns and channel integration alter the underlying conditions of competition, reshaping market structure over time. Accordingly, contemporary retail phenomena such as micro-shopping behavior and omnichannel integration can be conceptualized as structural drivers that reinforce concentration and network dominance within retail markets, rather than merely as shifts in consumer preferences or marketing practices

Micro-Shoppin and Omnichannel as Demand and Suplly Side Drivers

Micro-shopping represents a behavioral pattern on the demand side of retail markets, characterized by small-value and high-frequency transactions oriented toward short-term consumption needs (Yousef et al., 2022). At the aggregate level, this pattern is associated with fragmented retail demand distributed across time and space (Formanek & Sokol., 2022). From an industrial organization perspective, such fragmentation is commonly observed in retail markets with dense outlet networks, where frequent purchases are facilitated by spatial proximity and accessibility (Verhetsel et al., 2022) Accordingly, micro-shopping can be interpreted as a demand condition that is reflected in outlet density and the distribution of market shares among retail firms.

On the supply side, omnichannel integration refers to the coordination of physical stores and digital platforms within a unified retail system. Rather than being treated as a firm-level strategic outcome, omnichannel integration is considered as a structural characteristic of modern retail markets that is associated with enhanced coordination in inventory management and logistics (Jonas et al., 2022). In markets characterized by frequent and spatially dispersed transactions, such coordination is typically observed among large retail firms with extensive outlet networks and centralized distribution systems (Guiton, 2024).

From a descriptive industrial organization perspective, the coexistence of micro-shopping patterns and omnichannel integration is reflected in observable retail market structures. Retail markets characterized by dense outlet networks and integrated distribution systems tend to exhibit concentrated market share distributions and higher levels of network dominance (Syhyda et al., 2022). These patterns can be descriptively captured through indicators such as market share, outlet ownership ratios, and market concentration measures, which provide insights into the structural configuration of retail competition without implying causal relationships.

3. Proposed Method

This study adopts a descriptive-analytical approach within the framework of industrial organization to examine the structural implications of micro-shopping phenomena and omnichannel integration in Indonesia's retail market. The analysis relies on secondary quantitative data consisting of market share and retail outlet ownership of major retail firms over the 2022–2024 period. The data are obtained from industry reports and official sources. To represent

relatively stable market conditions and reduce short-term fluctuations, annual data are processed using a three-year average.

Market share for each retail firm is calculated using the following formula:

$$\boldsymbol{MSi = \frac{Qi}{\sum_{j=1}^{n}. Qj} \times 100\%}$$

Where MSi denotes the market share of firm I , and Qi represents the sales value of firm iii. This measure is used to describe the distribution of market power and the relative competitive position of retail firms, as presented in Table 1. (Scherer, 1990)

Retail outlet ownership is analyzed as a proxy for operational scale and network density, which is particularly relevant in the context of micro-shopping, given the importance of spatial proximity and transaction frequency. The total number of outlets operated by each firm is aggregated and reported in Table 2. To assess network dominance, an outlet ownership ratio is calculated as follows:

$$ORi \frac{Oi}{\sum_{j=1}^{n}. Oj} \times 100\%$$

where Ori denotes the outlet ownership ratio of firm iii, and Oi represents the number of outlets operated by firm iii. (Bain, 1951)

Market concentration is evaluated using the four-firm concentration ratio (CR4), calculated as:

This indicator describes the extent to which the retail market is dominated by the largest firms. In addition, overall market concentration and competitive intensity are measured using the Herfindahl–Hirschman Index (HHI), computed as: (Herfindahl & Hirschman, 1950)

$$\boldsymbol{HHI = \sum_{i=1}^{n}. MS2i}$$

To further capture the dominance of large retail networks, a Top-2 Outlet Ratio is employed, defined as:

$$CR4 \sum_{k=1}^{4} * MSk$$

All market structure indicators are summarized in Table 3 and interpreted descriptively to explain how micro-shopping patterns and omnichannel integration are reflected in the configuration of retail market structure and competitive dynamics in Indonesia. Consistent with the descriptive nature of the study, the analysis focuses on identifying structural patterns and associations without implying direct causal relationships.

4. Results and Discussion

Based on Table 1, the structure of Indonesia's retail market share during the 2022–2024 period indicates a high level of concentration among a small number of firms. Two national minimarket chains, Alfamart and Indomaret, jointly account for more than 74 percent of total retail market share, with individual shares of 37.20 percent and 36.80 percent, respectively.

This level of dominance suggests that Indonesia's retail market exhibits an oligopolistic structure characterized by the strong presence of large retail networks, particularly in proximity-based retail formats.

Other retail firms, such as Alfa Midi and Matahari Department Store, hold substantially smaller market shares of 6.08 percent and 4.33 percent, respectively. Meanwhile, specialized retailers and big-box formats, including Erafone, iBox, ACE Hardware, and Transmart Carrefour, each account for individual market shares below 4 percent. This distribution of market shares indicates that competitive capacity in Indonesia's retail market is highly concentrated among firms with extensive outlet networks and broad operational coverage.

Table 1. Average Market Share of Retail Firms in Indonesia, 2022-2024.

No	***Firms***	***Market Shares (%)***
1	Alfamart	37.20
2	Indomaret	36.80
3	Alfa Midi	6.08
4	Matahari Dept. Store	4.33
	Erafone	
5	iBox	3.37
6	Sports station	2.35
7	ACE Hardware	2.92
8	Transmart Carrefour	2.50
9	Mitra10	2.35
		2.12
10		

Findings reported in Table 2 further reinforce the pattern of structural dominance through retail outlet ownership. Over the 2022–2024 period, Indomaret and Alfamart operated approximately 23,400 outlets and 2,091 outlets, respectively, far exceeding the outlet numbers of other retail firms in the sample. Taken together, these two firms account for more than 90 percent of the total retail outlet network recorded in the study.

Table 2. Average Total Retail Outlets Amongst 2022-2024.

No	*Pelaku Usaha Ritel*	*Total Gerai Retail*
1	Alfamart	20,091
2	Indomaret	23,400
3	Alfa Midi	2,423
4	Matahari Dept. Store	161
	Erafone	
5	iBox	1,162
6	Sports station	162
7	ACE Hardware	269
8	Transmart Carrefour	236
9	Mitra10	85
		56
10		

The substantial disparity in outlet ownership reflects pronounced differences in operational scale across retail firms. Medium-scale retailers such as Alfa Midi operate a relatively limited number of outlets, totaling 2,423 units. In contrast, large-format retailers and specialized retail firms typically operate only hundreds or even tens of outlets. This pattern indicates that outlet network density constitutes a central structural characteristic of competition in Indonesia's retail market.

The analysis of market structure indicators presented in Table 3 indicates that Indonesia's retail market exhibited a very high level of concentration over the 2022–2024 period. The CR4 value of 84.81 percent suggests that the four largest retail firms collectively controlled more than four-fifths of the market. This finding is consistent with an oligopolistic market structure characterized by strong dominance of large retail firms.

Table 3. Indicators of Retail's Market Structure Along2022-2024.

Indikator	*Nilai*	*Interpretasi*
CR4 (%)	84.41	Konsentrasi pasar sangan tinggi
HHI	2,835.47	Pasar Sangat Terkonsentrasi
Rasio Gerai Top-2(%)	90.52	Dominasi jaringan sangat kuat

This pattern is further supported by the Herfindahl–Hirschman Index value of 2,835.47, which places Indonesia's retail market in the category of a highly concentrated market. The high HHI value indicates that competitive conditions are asymmetric, with market activity dominated by a small number of firms possessing substantial market power. In addition, the Top-2 Outlet Ratio reaches 90.52 percent, reflecting a very high level of network dominance by the two largest retail chains. This concentration of outlet ownership highlights the importance of network scale as a key source of competitive advantage in the retail market.

From an industrial organization perspective, the combination of high market concentration and strong network dominance suggests that retail competition in Indonesia is increasingly structured around firm-level advantages related to scale and network control, rather than being driven solely by product characteristics or isolated competitive strategies.

5. Conclusions

This study aims to analyze the implications of the micro-shopping phenomenon and omnichannel integration for retail market structure and competition in Indonesia from an industrial organization perspective. Based on the analysis of retail market structure over the 2022–2024 period, the findings indicate that Indonesia's retail market is characterized by a very high level of concentration, with strong dominance by a small number of large-scale retail firms. The distribution of market shares and retail outlet ownership suggests that Indonesia's retail market exhibits the characteristics of a network-based oligopoly, in which competitive advantage is primarily determined by operational scale and the density of physical retail networks.

The results demonstrate that market dominance in Indonesia's retail sector is reflected not only in the substantial market shares held by large retail firms, but also in their extensive ownership of retail outlet networks. Firms with wide outlet coverage occupy a strategic position in capturing retail demand that is spatially and temporally dispersed. This condition creates a pronounced asymmetry between large retail firms and smaller or traditional retailers, which face structural constraints in expanding their networks and scaling up operations.

In the context of micro-shopping, the study highlights that the shift toward small-value, high-frequency transactions structurally favors retail firms with dense outlet networks. Retail markets dominated by large minimarket chains reflect these firms' ability to aggregate transaction volumes through spatial proximity and consistent product availability. As such, micro-shopping functions as a reinforcing factor within an already concentrated market structure, rather than as a mechanism that expands competitive opportunities for smaller retail actors.

Overall, the interaction between micro-shopping patterns and omnichannel integration indicates a transformation in retail competition that extends beyond price and product considerations. Competitive dynamics in Indonesia's retail market are increasingly shaped by firms' capacity to manage extensive outlet networks, integrate distribution channels, and optimize operational scale to capture transaction volume. These developments contribute to a growing tendency toward market consolidation and a narrowing competitive space for small-scale and traditional retailers.

From an industrial organization perspective, the strengthening of market power among large retail firms has potential implications for long-term competitive dynamics. Accordingly, policy implications include the need for enhanced competition oversight to ensure that market consolidation does not lead to anti-competitive practices. In addition, policies that support the adaptation of small and traditional retailers, particularly in terms of access to technology, logistics, and channel integration, are important to sustain a more inclusive retail ecosystem.

Despite these contributions, this study has several limitations. First, the analysis relies on aggregate data on market share and outlet ownership, which does not directly capture micro-level transaction dynamics such as variations in transaction value and frequency across regions or retail formats. Second, the study adopts a descriptive-analytical approach and does not empirically test causal relationships between micro-shopping, omnichannel integration, and

changes in market structure. Therefore, the findings reflect structural patterns and tendencies rather than statistically estimated causal effects. Third, data availability limits the analysis to a specific time period, restricting the observation of longer-term structural changes in the retail market.

In conclusion, this study underscores that the transformation of Indonesia's retail ecosystem through micro-shopping behavior and the expansion of omnichannel integration has significant structural implications for market competition. The findings highlight the importance of competition policy and retail development strategies that address not only market efficiency, but also the sustainability of a more balanced and inclusive competitive structure amid increasing market consolidation.

References

Amory. (2025). Transformasi ekonomi digital dan evolusi pola konsumsi: Tinjauan literatur tentang perubahan perilaku belanja di era internet.

Amri, A., Salawali, W. A., Indama, I. S., Wahdaniah, & Bahasoan, A. N. (2024). Perubahan pola konsumsi masyarakat pasca pandemi COVID-19: Implikasi bagi pasar ritel di Indonesia. J-CEKI: Jurnal Cendekia Ilmiah, 3(5), 5005–5017.

Bain, J. S. (1951). Relation of profit rate to industry concentration. Quarterly Journal of Economics, 65(3), 293–324. https://doi.org/10.2307/1882217

Bonfrer, A., Chintagunta, P. K., & Dhar, S. K. (2022). Retail store formats, competition and shopper behavior: A systematic review. Journal of Retailing, 98(1), 71–91. https://doi.org/10.1016/j.jretai.2021.11.002

Cahyani, D., Nuraeni, E., Agustina, R., Ashriana, A. N., Kridaningsih, A., Rizkawati, N., Rachmawati, E., Abdillah, A., Setiawan, E., Waluyo, S. E. Y., Sholeh, R., Sigita, D. S., Setyaasih, & Ghozali. (2025). Manajemen ritel: Strategi dan transformasi. Tajaza Innovatix Labs.

Chen, M., & Yan, L. (2025). Competition policy and corporate labor investment efficiency: Evidence from China. Managerial and Decision Economics. Advance online publication. https://doi.org/10.1002/mde.XXXX

Costa, P., Rodrigues, S., & Almeida, B. (2025). Consumers' attitudes toward virtual try-on technology: An extended TAM model. Journal of Retailing and Consumer Services. Advance online publication. https://doi.org/10.1016/j.jretconser.2025.XXXX

Fitriyani, J. (2023). Perlindungan hukum terhadap keberlangsungan usaha kecil dan pasar tradisional atas kehadiran ritel modern (Undergraduate thesis). Kota Medan.

Formánek, T., & Sokol, O. (2022). Location effects: Geo-spatial and socio-demographic determinants of sales dynamics in brick-and-mortar retail stores. Journal of Retailing and Consumer Services, 66, 102902. https://doi.org/10.1016/j.jretconser.2022.102902

Foster, L., Haltiwanger, J., & Krizan, C. J. (2006). Market selection, reallocation, and restructuring in the U.S. retail trade sector in the 1990s. Review of Economic Studies, 73(3), 748–798. https://doi.org/10.1111/j.1467-937X.2006.00397.x

Franco, M. (2025). Assembling rotations: How consumers put objects they collect to use. Journal of Consumer Culture. Advance online publication. https://doi.org/10.1177/1469540525XXXX

Guiton, F. (2024). Essays in industrial organization and inventory management (Doctoral dissertation). University of Toronto.

Herfindahl, O. C. (1950). Concentration in the steel industry (Unpublished doctoral dissertation). Columbia University.

Hirschman, A. O. (1945). National power and the structure of foreign trade. University of California Press.

Jones, A. L., Miller, J. W., Griffis, S. E., Whipple, J. M., & Voorhees, C. M. (2022). An examination of the effects of omni-channel service offerings on retailer performance. International Journal of Physical Distribution & Logistics Management, 52(2), 150–169. https://doi.org/10.1108/IJPDLM-05-2021-0197

Kholishudin. (2023). Kompetisi pasar dan transaksi di era globalisasi. Journal of Islamic Banking, 4(2).

Meliana, D., Riswati, J., & Astuti, D. (2025). Analisis perkembangan bisnis ritel di Indonesia. Journal of Business Economics and Management, 1(3), 235–243.

Scherer, F. M., & Ross, D. (1990). Industrial market structure and economic performance (3rd ed.). Houghton Mifflin.

Sharma, A. (2025). A tale of stores and screens: Unveiling consumer behaviour in omnichannel retailing through the lens of behavioural reasoning. Journal of Retailing and Consumer Services. Advance online publication. https://doi.org/10.1016/j.jretconser.2025.XXXX

Sopang, F. I. (2021). Analisis strategi bauran pemasaran eceran yang menentukan tingkat kepuasan konsumen. Cybernetics: Journal of Educational Research and Social Studies, 2(4), 1–14.

Syhyda, L. O., Saher, L. Y., & Olefirenko, O. M. (2022). Marketing distribution policy. Publishing House.

Tirole, J. (1988). The theory of industrial organization. MIT Press.

Tokman, M., & Waldsmith, C. (2022). Interfirm power-dependence in marketing channels: A historical perspective. Journal of Marketing Development and Competitiveness, 16(4), 11–27.

Verhetsel, A., Beckers, J., & Cant, J. (2022). Regional retail landscapes emerging from spatial network analysis. Regional Studies, 56(11), 1829–1844. https://doi.org/10.1080/00343404.2022.2039184

Youssef, S. B. H., & Boudriga, N. (2022). A resilient micro-payment infrastructure: An approach based on blockchain technology. Kuwait Journal of Science, 49(1).

Zhang, D., Meng, S., & Wang, Y. (2025). Impact analysis of price promotion strategies on consumer purchase patterns in fast-moving consumer goods retail. Academia Nexus Journal, 4(1).