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Market Dynamics, Business Strategy, and Performance of the Telecommunications in Indonesia for the 2021-2025 Period

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Abstract: *This study analyzes market concentration, market dynamics, corporate strategies, and company performance in the Indonesian telecommunications industry during 2021–2025 using the Structure-Conduct-Performance (SCP) approach. This quantitative descriptive study uses secondary data from annual financial reports and purposive sampling based on revenue and data availability. The study identifies ten companies in the annual sample, comprising cellular operators and telecommunications infrastructure providers. However, the combined observation list contains eleven company codes across the five-year period because Smartfren was reported independently from 2021 to 2024 and ceased to appear as a separate reporting entity following its merger with XL Axiata in 2025, while Bali Towerindo entered the observed list in 2025. Market concentration is measured using the Concentration Ratio of the four largest companies (CR4) and the Herfindahl-Hirschman Index (HHI) under two scenarios. Scenario A combines cellular operators and telecommunications infrastructure providers, whereas Scenario B focuses exclusively on cellular operators. The results show that CR4 in Scenario A remained above 89% and reached 94% in 2025, while Scenario B recorded a CR4 of 100% throughout the observation period. The HHI exceeded 2,500 in both scenarios, indicating a highly concentrated market under the stated classification. Concentration declined during 2021–2024 before increasing in 2025 following the XL Axiata–Smartfren merger. These findings indicate a structural increase in market concentration after the merger, but do not establish that competition is weak in every dimension or that higher concentration necessarily improves company performance.*

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Introduction

The role of the telecommunications industry is growing along with the development of digital technology that impacts people's lives, such as education, public services, trade, and various other activities that require the internet. The Central Statistics Agency (BPS) recorded that 77.63% of Indonesia's population has internet access. This represents a 4.85% increase compared to 72.78 in 2024. This increase is driven by the surge in mobile phone ownership among the public, which will reach 70.75% in 2025. The information and communications sector even contributes 4.40% to GDP, indicating that digital connectivity and services have become a significant part of the economy, thus requiring attention to the development of the industry's structure and level of competition within it.

The structure of the telecommunications industry has undergone several changes along with company development and consolidation actions. One such change during the study period was the merger of XL Axiata and Smartfren in 2025. The government officially approved the merger of PT XL Axiata Tbk, PT Smartfren Telecom Tbk, and PT Smart Telecom on April 17, 2025, resulting in a new entity named PT XL Smart Telecom Sejahtera Tbk (XLSMART). This merger resulted in a reduction in the number of business groups that previously operated separately within the Indonesian cellular operator industry. Therefore, this topic is relevant to study from the perspective of changes in market concentration. The period 2021-2025 was chosen to illustrate the development of concentration several years before the merger and to capture conditions in the year when the XL Axiata and Smartfren merger took effect. Thus, 2021 serves as the starting point for observation, 2022-2024 depicts developments before the merger, and 2025 is the year when the structural change occurs.

From an industrial economic perspective, market concentration is one aspect that can be used to assess the level of competition. The greater the market share concentrated in a few companies, the higher the level of concentration. This study uses the Concentration Ratio 4 (CR4) to measure the proportion of market share controlled by the four largest companies and the Herfindahl-Hirschman Index (HHI) to calculate the distribution of market share across all companies in the analyzed market. The use of these concentration indicators is relevant to the merger assessment in Indonesia conducted by the Business Competition Supervisory Commission (KPPU).

Previous research has shown that the Structure Conduct Performance (SCP) approach has been used to analyze the Indonesian telecommunications industry. Previous research analyzed the structure, behavior, and performance of the telecommunications industry using secondary data (Rosyidta and Octasylva, 2020). For the structural aspect, the study used the Herfindahl-Hirschman Index (HHI), Concentration Ratio (CR), and Minimum Efficiency of Scale (MES). The results showed that the Indonesian telecommunications industry has a tight oligopoly structure, with an HHI value of 3,476 and a CR4 of 95.26% based on the number of subscribers. The study also showed that Telkomsel has the largest market share, while in the behavioral aspect of the industry, it was found that there are pricing strategies, product innovation, network sharing, and mergers and acquisitions. Other research also discusses the structure, behavior, and performance of the Indonesian cellular telecommunications industry with a longer observation period, namely the period 2010-2022 (Fikri and Firmansyah, 2024). However, these studies were conducted before the recent industry consolidation, particularly the merger of XL Axiata and Smartfren in 2025.

Based on the research findings, there are gaps in the observation period and the dynamics of industry structure. Previous studies using data up to 2022 were unable to describe changes in concentration following the merger of XL Axiata and Smartfren in 2025. Furthermore, changes in concentration during the period before and during the merger need to be observed more systematically through year-over-year developments in CR4 and HHI. This study fills this gap by using company revenue data from 2021 to 2025 to map changes in market share, company position, and industry concentration levels. This approach is expected to provide an empirical overview of the development of the competitive structure of the Indonesian telecommunications industry and the changes in concentration that occurred concurrently with the merger of XL Axiata and Smartfren.

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Based on this description, this study aims to analyze the level of market concentration, market dynamics, corporate strategies, and performance of Indonesian telecommunications industry companies based on revenue during the 2021-2025 period. This study uses the Concentration Ratio 4 (CR4) and the Herfindahl-Hirschman Index (HHI) as the main measuring components in determining the level of market concentration and market competitive structure in the Indonesian telecommunications industry.

Research methods

Types of research

The type of research used is descriptive quantitative research, which utilizes numerical data in its analysis. The data used in this study is quantitative market share based on the total annual revenue of cellular operators and telecommunications infrastructure providers, respectively.

Place and Time of Research

This research will be conducted on cellular operators and telecommunications infrastructure providers with the highest market share based on total annual revenue for the period 2021-2025. This period encompasses the largest wave of consolidation in Indonesian telecommunications history, which has reshaped the market share landscape for both cellular operators and tower infrastructure. The five-year period of 2021-2025 is long enough to capture medium-term trends. From the post-pandemic recovery phase and accelerated digital transformation in 2021, to the consolidation phase or major merger of Indosat and Three in 2022, to the short-term impact of the post-merger of XL and Smartfren in 2025, this study simultaneously represents current market conditions because it covers the last five years with complete annual financial report data available secondary at the time of the study. This will reveal which companies are able to maintain their market share effectively, the market dynamics from 2021-2025, their strategies, and their performance during 2021-2025.

Population and Sample

The population in this study was cellular operators and telecommunications infrastructure providers operating in Indonesia during the 2021-2025 period. A total of 17 cellular operators and telecommunications infrastructure providers were operating. The sampling technique used was purposive sampling, with the criteria being those with the highest market share based on total revenue consistently from 2021-2025 and issuing financial reports annually. Based on these predetermined criteria, 10 companies were identified, consisting of 4 cellular operators and 6 infrastructure providers, with the highest market share.

Data Types and Data Collection

The data used is secondary data. This secondary data represents annual revenue. The total annual revenue of each company from 2021 to 2025 will be calculated using market share, concentration ratio, and Herfindahl-Hirschman Index (HHI). These companies are comprised of four cellular operators and six telecommunications infrastructure providers. The data is sourced from the Indonesian Banking Statistics (SPI), the Indonesian Financial System Statistics (SSKI), and the annual financial reports of each company included in this study.

Data Analysis Methods

This study will use a structural analysis approach, namely the Structure Conduct Performance (SCP) hypothesis. This hypothesis focuses on market concentration, namely the control of market share in an industry by a few companies. To measure market concentration, two ratios will be used. The first is the Concentration Ratio for the four companies with the largest market share (CR4), and the second is the Herfindahl-Hirschman Index (HHI).

Some steps that the author will take to conduct a market concentration analysis are as follows:

1. Collecting data in the form of total annual revenue for the company as a whole and total annual revenue for each company.
2. Calculate the market share of each company.
3. Determine the sample.

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4. Presenting quantitative data that will be used as material for conducting market concentration analysis using the Concentration Ratio for 4 companies (CR4) and the Herfindahl-Hirschman Index (HHI).
5. Comparing the industrial structure of companies based on the two concentration ratios.

Results and Discussion

Table1Total Revenue of Telecommunication Companies 2021-2025 (in billions)

Company	Year					Total Revenue
	2021	2022	2023	2024	2025	
TLKM	142,210	147,306	149,216	149,967	146,742	735,441.00
ISAT	31,388.30	46,752.30	51,288.80	55,586.90	56,518.10	241,534.40
EXCL	26,766.00	29,172.00	32,341.00	34,402.00	42,485.00	165,166.00
FREN	10,456.83	11,202.58	11,655.71	11,419.73	-	46,135.57
TOWR	8,635.35	11,035.65	11,740.35	12,735.82	13,327.91	56,074.34
TBIG	6,179.60	6,524.40	6,640.60	6,867.40	6,909.60	33,121.60
LINK	4,464.90	4,370.78	3,925.58	2,520.69	3,081.59	18,363.54
SUPR	2,075.97	1,888.26	1,892.09	1,817.39	1,910.68	9,584.38
CENT	1,747.04	2,320.07	2,252.94	2,464.55	2,536.07	11,320.68
BALI	-	-	-	-	1,239.21	1,239.21
IBST	975.21	1,088.24	1,109.76	862.47	871.89	4,907.56
Total	234,899.19	261,660.28	272,062.82	278,643.93	275,622.06	

Source: Annual Financial Report, 2021-2025

Information:

- TLKM – Telkom Indonesia (Persero) Tbk
- ISAT - Indosat Tbk.
- EXCL - XLSMART Telecom Sejahtera Tbk.
- FREN – PT. Smartfren Telecom Tbk.
- TOWR - Sarana Menara Nusantara Tbk.
- TBIG - Tower Bersama Infrastructure Tbk.
- LINK - Link Net Tbk.
- SUPR - Tunas Pratama Solutions Tbk.
- CENT - Centratama Telekomunikasi Indonesia Tbk.
- BALI - Bali Towerindo Sentra Tbk.
- IBST - Inti Bangun Sejati Tbk.

This market share analysis covers the top 10 companies in the telecommunications and infrastructure provider sectors. However, the sample list is subject to corporate dynamics. Smartfren was listed independently for the period 2021-2024, before being removed from the independent list in 2025 due to a corporate merger, and its position in the top 10 list was replaced by Bali Tower. The group of major cellular operators, namely Telkomsel, Indosat, and XL, can be said to be growing steadily. Telkomsel is relatively stable with a slight decline, as evidenced by its revenue from 2021-2024, which tended to increase. However, in 2025, revenue, which usually increases, now falls to Rp146 trillion. This indicates that Telkomsel is starting to be squeezed by competitors. In 2021-2022, Indosat's revenue actually increased significantly, from Rp31.4 trillion in 2021 to Rp56.5 trillion in 2025. It can be said that Indosat's revenue increased 80% in 5 years, this is also the result of post-merger synergies with Tri Indonesia (2022) which enlarged the customer base and network efficiency. XL's revenue also grew

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from Rp26.8 trillion to Rp42.5 trillion with a sharp spike in 2025 due to consolidating Smartfren's revenue after the XLSmart merger.

The tower provider group, TOWR, TBIG, SUPR, CENT, and IBST, experienced moderate growth, driven by non-tower expansion. Among other infrastructure companies, TOWR was the most expansive, initially generating revenue of IDR 8.6 trillion, and now reaching IDR 13.3 trillion. This revenue increase was due to TOWR's acquisition of 6,000 Telkomsel towers in 2022, IBST in July 2024, and its diversification into fiber optics (FTTH/FTTT). TBIG and CENT experienced stable but moderate growth. IBST's growth actually declined due to TOWR's majority share acquisition in mid-2024, consolidating its business scale into a new holding company.

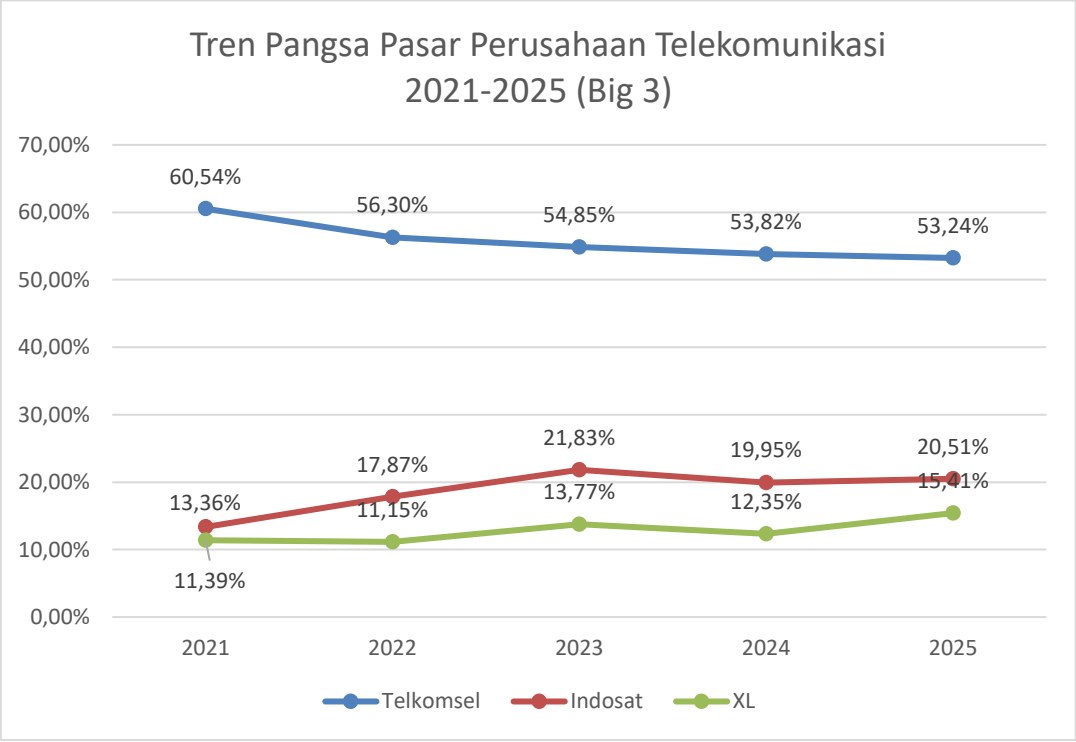
Smartfren is the only company that continues to erode, to the point of disappearing as an independent entity. Its revenue nearly stalled and then declined. Its peak revenue reached Rp11.74 trillion in 2023, then dropped to Rp11.41 trillion in 2024. Meanwhile, the company had previously achieved a profit of Rp1.06 trillion in 2022, which then turned into a loss of Rp108.9 billion in 2023. This loss soared 11-fold to Rp1.29 trillion in 2024. Structural indications that Smartfren's business scale is too small to compete efficiently include increasing operational costs, network depreciation, and debt interest. In this study, two scenarios will be carried out:

- Scenario A: Calculating CR4 and HHI using data from 10 mixed companies, namely, a combination of mobile operator companies and telecommunications infrastructure providers (tower and internet companies).
- Scenario B: Calculating CR4 and HHI specifically for mobile operators (Telkomsel, Indosat, XL, Smartfren).

Based on the approach method used in this research, the two scenarios will be analyzed using Structure Conduct Performance (SCP).

Market Structure (Market Share)

1. Market share

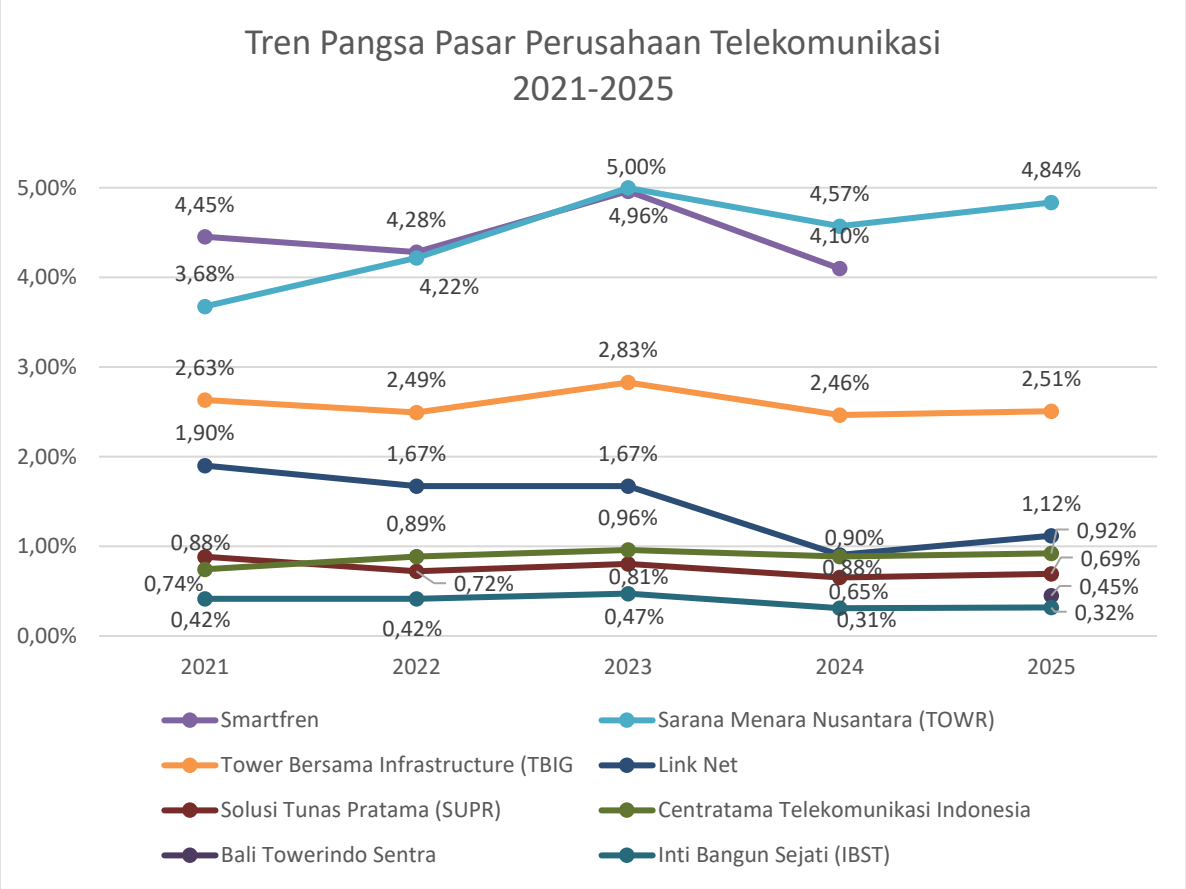


Picture 1 Chart of 3 Companies with the Largest Market Share

This graph shows three distinct patterns over the same period. Telkomsel's share declined consistently from 60.54% (2021) to 53.24% (2025), a 7.3 percentage point decline over five years. Indosat's share surged from 13.36% to a peak of 21.83% in 2023, then declined slightly to 19.95% (2024), and then rose again to 20.51% (2025). XL's share remains relatively flat at around 11-14% throughout 2021-2024, before jumping sharply to 15.41% in 2025. This pattern directly reflects the

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conduct of horizontal corporate mergers: Indosat's post-2022 surge is the result of its consolidation with Hutchison 3 Indonesia, which enlarges its customer base and network efficiency, while XL's 2025 surge is a direct effect of its merger with Smartfren to form XLSmart, which combines a combined customer base of over 94.5 million with projected pro forma revenue of IDR 45.8 trillion. In other words, two of the three market share increases seen in this chart are not purely the result of independent growth, but rather the result of market structure engineering through mergers.

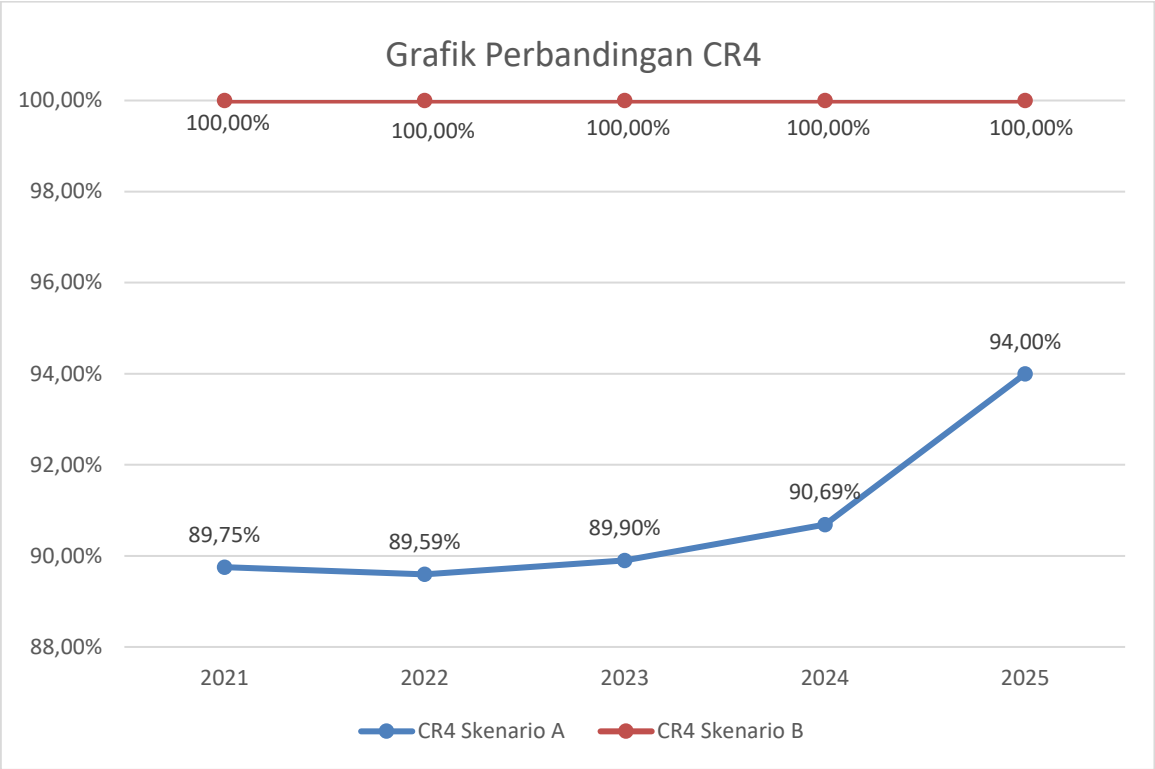


Picture 2 Company Market Share Graph

In 2021-2022, Smartfren still had a slight lead over TOWR. However, since 2023, the position has reversed. TOWR, with a value of 5.00%, outperformed Smartfren with a value of 4.96%, and the gap widened sharply in 2024, when Smartfren was valued at 4.10% while TOWR was valued at 4.57%. This was due to TOWR acquiring approximately 6,000 Telkomsel towers in the third quarter of 2022 and consolidating a majority stake in Inti Bangun Sejahtera (IBST) since July 1, 2024. As a result, its revenue grew 8.48% annually to IDR 12.73 trillion in 2024. Meanwhile, Smartfren's depreciation and debt interest expenses actually increased, causing it to reverse from a profit of IDR 1.06 trillion (2022) to a loss of IDR 108.9 billion (2023), and its loss soared 11-fold to IDR 1.29 trillion (2024). The decline in IBST from 0.47% (2023) to 0.31% (2024) does not reflect a business decline, but rather an accounting consolidation, as the majority of its shares have been acquired by TOWR, resulting in a portion of its revenue being incorporated into its new parent company's financial statements. The emergence of Bali Towerindo Sentra in 2025 (0.45%) precisely fills the void in Smartfren's position, which disappeared from the chart. This does not signal a sudden surge in Bali Tower's growth, but rather a mechanical effect of Smartfren's disappearance as an independent reporting entity following the merger effective April 16, 2025.

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2. Concentration Ratio 4



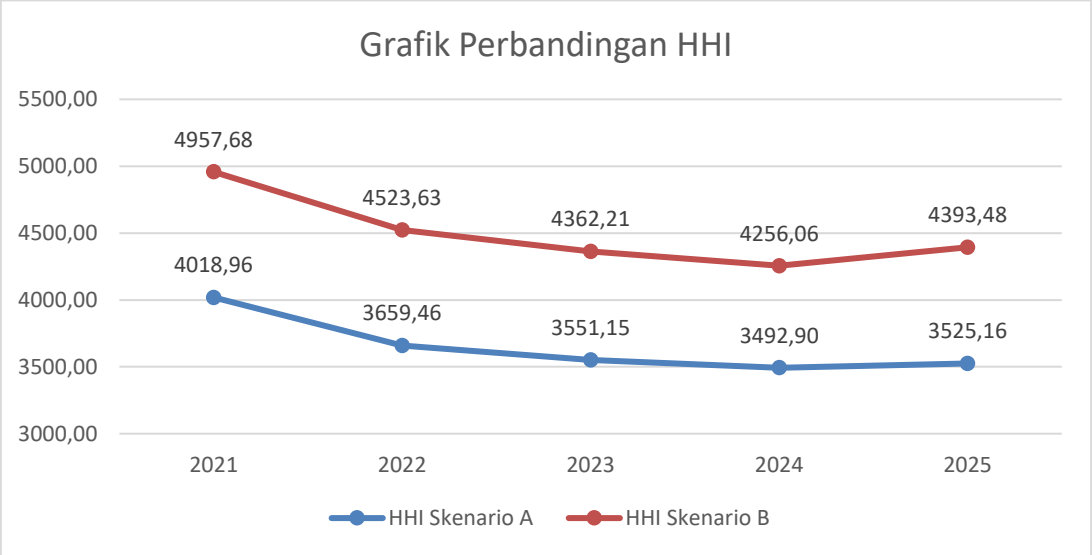
Picture 3 Concentration Ratio of Telecommunication Companies

CR4 for Scenario B remains perfectly flat at 100% throughout 2021-2025. This is because Scenario B is a pure mobile operator company calculation, which essentially only includes 3-4 companies: Telkomsel, Indosat, XL/XLSmart, and Smartfren before the merger. Therefore, the four largest companies automatically cover the entire defined market population, making CR4 mathematically always equal to 100% regardless of changes in its composition. CR4 becomes degenerative when the total number of companies in the population is ≤4, so for Scenario B, the HHI is much more informative than CR4.

CR4 in Scenario A is calculated by 10 mobile operators and infrastructure providers. This makes the resulting graph much more dynamic. The graph moves steadily in the range of 89.6-90.7% in 2021-2024, then jumps sharply to 94.00% in 2025. This spike coincides precisely with the XL-Smartfren merger. In market structure theory, when two competitors, one of which is near the CR4 limit, merge into a larger entity, the number of independent competitors outside the dominant group decreases, thereby automatically increasing the combined share of the top group. This is evidence that horizontal consolidation structurally increases market concentration, in line with the basic prediction of the SCP hypothesis that structural changes and a reduced number of players will impact the overall level of market competition.

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HHI



Picture4Comparison Chart of HHI of Telecommunication Companies

The HHI trend graph is actually counterintuitive for most of the period, with both Scenario A (4,018.96 to 3,492.90) and Scenario B (4,957.68 to 4,256.06) declining from 2021 to 2024. This suggests that the market is actually de-concentrating, meaning market concentration is becoming slightly more competitive throughout 2021-2024. Consistent with Figure 1, where Telkomsel continues to lose market share to Indosat and XL, however, by 2025, both scenarios reverse upwards (Scenario A to 3,525.16; Scenario B to 4,393.48). This is a typical mathematical effect of horizontal mergers, where combining two small market shares into a single entity produces a larger squared contribution to the HHI than summing their squares separately. Thus, despite the reduced number of players from the seemingly greater market competition, the concentration index actually increases.

The HHI value in both scenarios consistently remained above the 2,500 threshold throughout the period. The threshold, which conventionally refers to antitrust merger guidelines used by competition regulators in various jurisdictions, classifies the market as highly concentrated. This confirms that the Indonesian telecommunications industry, whether viewed purely from the operator perspective or combined with infrastructure, will remain a tight oligopoly throughout 2021-2025, not a particularly competitive market despite some signs of easing.

Conduct

The Indonesian cellular telecommunications industry is experiencing rapid customer expansion as the number of operators entering the market increases. However, this increase in players has fueled unhealthy price competition. The increasingly fierce competition between operators has prompted them to adopt various strategies, including price wars. Research by Rijanto (2015) shows that regulatory changes in 2008 were related to this situation.*tariff pricing war*in the Indonesian telecommunications industry and has an impact on*operating revenue margin*and the need for corporate financial flexibility. In the 2016–2018 period, tariff competition again became a concern as cellular operators competed to create business strategies to retain customers amidst increasingly saturated market conditions. Cheap tariffs in the short term can significantly increase the number of customers, but increased traffic is not always followed by a comparable increase in revenue, potentially putting pressure on the financial condition of operators. Sa'diya and Yuliaty found that tariff wars had a negative impact on the financial performance of telecommunications companies in 2018, as reflected in the decline*current ratio*, improvement*debt to equity ratio*, decline*total asset turnover*, and decline*net profit margin*.

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The impact of the tariff war was also seen in market performance. The study found that*abnormal return*negative and significant in May 2017 and March 2018, which indicates that the market reacted negatively to the tariff war event in the telecommunications industry.This situation then triggered a shift in industrial conduct patterns from price competition to consolidation. From the SCP perspective, this change can be seen as a shift in corporate strategy in facing an increasingly concentrated market structure. Recent research on the Indonesian cellular telecommunications industry, using data from 2010–2022, found relatively high market concentration and demonstrated a significant relationship between market share and company performance.(Fikri and Firmansyah, 2024).

The direction of consolidation is becoming clearer as the government pushes for a reduction in the number of operators. In 2023–2024, Minister of Communication and Informatics Budi Arie Setiadi stated that consolidation toward three operators is seen as a healthier and more efficient way to make the telecommunications industry healthier and more efficient.The consolidation was then realized through the merger of XL Axiata and Smartfren which resulted in XLSMART and became effective on April 16, 2025. Study byAriwibowo et al (2026)analyzing the impactpost-mergeras follows:

a. **Market competition is becoming increasingly competitive.**The research results show that competition in the telecommunications market post-merger has actually become more intense. This aligns with the initial goal of the merger to strengthen XL and Smartfren's positions, which previously ranked third and fourth respectively, so they could compete more equally with Indosat and Telkomsel.
b. **Opportunity to become a market leader.**The study concludes that XLSmart has the potential to become a market leader in the Indonesian telecommunications industry, thanks to its significantly larger combined customer base and brand advantage that caters to a diverse market.
c. **Complementary competitive advantages.**In terms of business strength, this study found that XLSmart has a complementary competitive advantage between XL Axiata's assets and capabilities (extensive network, corporate base) and Smartfren's (digital innovation), thus opening up opportunities to overcome the weaknesses of each entity before the merger.
d. **Main challenges: corporate cultural differences, not technical aspects of the network.**Interestingly, this study found that the main post-merger challenge was not in the network or spectrum aspect, but rather in the obstacles to unifying the different corporate cultures (corporate cultural barriers) between XL Axiata and Smartfren, and these obstacles were attempted to be overcome through the implementation of shared work culture values called ICare.

Performance

In the pre-merger period (2021-2024), XL Axiata and Smartfren operated separately within relatively limited and fragmented economies of scale, with XL's market share ranging from 11.15% to 13.77% and Smartfren's ranging from 4.10% to 4.96%. This intense competitive environment limited the two operators' latitude in independently managing capital expenditure (CAPEX) and network operating costs. Entering the post-merger phase in 2025, the combined XLSmart entity successfully consolidated a much larger and stronger customer base. Case studies show that this strategic merger successfully integrated XL Axiata's extensive network infrastructure with Smartfren's flexibility and digital product innovation. This spectrum synergy and infrastructure efficiency directly drove a surge in the combined entity's market share from 12.35% in 2024 to 15.41% in 2025, while strengthening XLSmart's position as an increasingly competitive balancing entity in Indonesia's telecommunications triopoly market structure.

The market structure of the Indonesian telecommunications industry is a tight oligopoly, with CR4 values consistently ranging from 60% to 100%, exactly the same as the pattern in the previously calculated dataset, where CR4 never fell below 89% throughout 2021–2025. However, based on empirical evidence in the same industry, a study linking market structure (CR4 and HHI) to company performance through regression analysis in the Indonesian telecommunications industry found that although the industry is highly concentrated and indicates the presence of a dominant company with the highest profitability (in this case Telkomsel), the relationship between market structure and company performance predicted by the classic SCP hypothesis was not statistically significant (Nugroho & Darwanto, 2020). This finding is relevant for a more careful reading of the impact of the XL-Smartfren consolidation. The post-merger HHI increase found in this research data from 3,493 to 3,525 in the all-

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industry scenario, and from 4,256 to 4,393 in the four-mobile operator scenario does indicate that the market structure has shifted toward greater concentration, but based on the empirical evidence above, this structural change cannot be assumed to result in a linear improvement in XLSmart's financial performance. Further studies are needed on other variables, such as the level of operational efficiency after integration and the realization of cost synergies, to be able to conclude more accurately whether this consolidation actually has a positive impact on company performance, rather than simply changing the market structure on paper.

Telkomsel's dominance is structural, not a coincidence of the business cycle. By the end of 2024, Telkomsel still recorded the highest revenue market share in the industry at 51.8%, even its net profit share to the industry reached 75.6%, far exceeding its revenue share, indicating Telkomsel's profitability margins are much healthier than its competitors. This is supported by a customer base of 159.4 million and a network of 271,040 BTS (including 975 5G BTS) as of the end of 2024, an infrastructure scale that is practically impossible for competitors to match in the short term, even by the merged XLSmart, because Telkomsel with a customer base of 159.9 million is still difficult to match even if the two major competitors were combined. The historical factors are clear: Telkomsel is a subsidiary of state-owned Telkom Indonesia, with a first-mover advantage since the 2G era, the widest spectrum ownership across all frequency bands, and recently strengthened its position through the migration of its IndiHome fixed broadband business to Telkomsel since 2023. Telkomsel has not collapsed completely; the company remains the number one. However, its market share trend continues to erode, and this can be explained by several structural and conduct factors:

1. **Erosion of legacy businesses.**Telkomsel's legacy voice and SMS revenue fell by approximately Rp2.9 trillion in the first nine months of 2024 compared to the same period in 2023, while this segment still accounts for 70% of the cellular market share outside Java. Consequently, the decline in legacy demand directly impacted its core revenue stream outside Java.
2. **ARPU stagnation.**Telkomsel's ARPU remained flat at around Rp44,000–48,000 throughout 2020–2024 and fell again by 7.4% annually in the first half of 2025, in contrast to Indosat's ARPU which actually rose by 2.5% in the same period, indicating that Telkomsel is less agile in its data monetization strategy compared to its competitors.
3. **Price pressure from consolidated competitors.**Post-merger Indosat and XL/XLSmart have become more aggressive in offering cheap data packages and digital service collaborations, thus capturing price-sensitive customers who were previously loyal to Telkomsel.
4. **High capex burden without commensurate results.**Continued 4G network expansion and 5G trials require significant capital expenditures, but have not yet delivered revenue returns commensurate with the investment, thereby suppressing growth margins even though aggregate profits are still growing.

Integrating the four findings above into the SCP framework: The industry structure moves from a 4-player oligopoly (2021–2024) to a 3-player oligopoly plus a handful of tower companies (2025), with concentration levels (CR4/HHI) loosening and then tightening again due to mergers. Driving this shift are two waves of horizontal mergers (Indosat–Tri 2022, XL–Smartfren 2025) explicitly motivated by infrastructure cost efficiencies and financial pressures on weaker players, coupled with aggressive pricing strategies by competitors and non-tower expansion by infrastructure companies (TOWR into fiber optics and acquisitions). Telkomsel remains the most profitable in absolute terms but has lost market share growth momentum; Indosat has performed best post-merger; while Smartfren is clear evidence of the failure to survive alone in an increasingly concentrated market structure, leading to its exit from the market as an independent entity.

Conclusion and Suggestions

Based on the research results, the Indonesian telecommunications industry for the 2021–2025 period exhibits a tight oligopoly structure with a high level of concentration. This is indicated by the HHI value consistently above 2,500, while the CR4 in Scenario A is above 89% and Scenario B reaches

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100%. Although market concentration decreased during 2021–2024 as Telkomsel's market share decreased and Indosat and XL's market position increased, concentration increased again in 2025 following the merger of XL Axiata and Smartfren. This change indicates that horizontal consolidation can structurally increase market concentration. From a conduct perspective, the industry experienced a shift from price competition to consolidation and efficiency, while in terms of performance, there were differences in development between companies, with Telkomsel maintaining a high revenue share and profitability, Indosat experiencing an increase after the merger, and Smartfren no longer operating as an independent entity after the merger. However, increased concentration cannot be directly interpreted as an improvement in the financial performance of the merged companies.

This study has limitations because it uses a descriptive quantitative approach based on annual revenue, CR4, and HHI, thus not inferentially testing the relationship between structure, behavior, and company performance. Furthermore, the post-merger period for XLSmart is limited to 2025, thus not being able to describe the impact of integration in the medium and long term. Future research is recommended to extend the observation period, use regression or econometric models to test the relationship between market structure and profitability and efficiency, and add conduct indicators such as advertising spending, research and development, service quality, and pricing strategy. Using market share based on the number of subscribers can also be used as a comparison to the revenue-based approach. Practically, the research findings can be used by regulators to monitor the impact of consolidation on competition, tariffs, and service quality. For companies, the research results emphasize the importance of efficiency, innovation, revenue diversification, and post-merger integration management so that changes in market structure can be followed by sustainable performance improvements.

Bibliography

Adawiyah, W. R. (2011). Faktor Penghambat Pertumbuhan Usaha Mikro Kecil Menengah (UMKM): Studi di Kabupaten Banyumas (Artikel web). Diakses di http://jp.feb.unsoed.ac.id/index.php/sca-1/article/view/134/139

Adiningsih, S. (2001). Regulasi dalam Revitalisasi Usaha Kecil dan Menengah di Indonesia (Artikel web). Diakses di http://jurnal.unikom.ac.id/vol4/art7.html

Ariyanti, M., & Rekarti, E. (2016). Analisis pengaruh jumlah pelanggan, tarif dan promosi terhadap pendapatan operator telekomunikasi seluler di Indonesia. *Jurnal Ekonomi Pembangunan Analisis (JEPA)*, 3(2). https://jurnal.pancabudi.ac.id/index.php/jepa/article/download/328/309/

Ariwibowo, M. F., Indra, A. M., & Abi Anwar, U. A. (2026). Analysis of telecommunication market competition in Indonesia: A case study of the XL-SMART merger. *International Journal of Management Science and Information Technology*, 6(1), 931–939. https://doi.org/10.35870/ijmsit.v6i1.7009

Axiata Group Berhad. (2024, Desember). *Axiata announces signing of definitive agreement with Sinar Mas on proposed merger of XL Axiata and Smartfren* (Artikel web). Diakses di https://www.axiata.com/media/news/2024/axiata-announces-signing-definitive-agreement-sinar-mas-proposed-merger-xl-axiata-and

Badan Pusat Statistik. (2026, 31 Agustus). *Statistik telekomunikasi Indonesia 2025* (Artikel web). Diakses di https://www.bps.go.id

Bain, J. S. (1956). *Barriers to new competition: Their character and consequences in manufacturing industries*. Harvard University Press. https://doi.org/10.4159/harvard.9780674188037

Digital Library Perbanas Institute. (n.d.). *Struktur pasar dan kinerja industri telekomunikasi Indonesia* (Artikel web). Diakses di https://digilib.perbanas.id/index.php?p=show_detail&id=13254

Fikri, M. K., & Firmansyah. (2024). Market structure, conduct, and performance in Indonesia's cellular telecom industry. *JEJAK: Jurnal Ekonomi dan Kebijakan*, 17(2), 1-18. https://doi.org/10.15294/jejak.v17i1.14358

Heaptalk. (2024, 12 Desember). *XL Axiata and Smartfren officially merge at a US$6.5bn value* (Artikel web). Diakses di https://heaptalk.com/news/xl-axiata-and-smartfren-officially-merge-at-a-us6-5bn-value/

IDN Times. (2025, 27 Agustus). *Bos XL Axiata ungkap alasan mau merger dengan Smartfren* (Artikel web). Diakses di https://www.idntimes.com/business/economy/bos-xl-axiata-ungkap-alasan-mau-

https://doi.org/10.61536/escalate.v4i4.891
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merger-dengan-smartfren-00-rgfwk-yb0fxn
Kementerian Komunikasi dan Digital. (2024, 21 November). *Penilaian M&A - KPPU* (Artikel web). Portal Komdigi. Diakses di https://portal.komdigi.go.id/kanal-publik/berita-kini/9266
Kementerian Komunikasi dan Informatika. (2024). *Menkominfo: 5 tahun lagi hanya ada 4 operator seluler* (Artikel web). Diakses di https://www.komdigi.go.id/berita/sorotan-media/detail/menkominfo-5-tahun-lagi-hanya-ada-4-operator-seluler
Khansa, K. A., & Shofwan. (2022). Perbandingan pengukuran struktur persaingan Herfindahl-Hirschman Index dan Concentration Ratio industri perbankan Indonesia. *Contemporary Studies in Economic, Finance, and Banking*, 1(3), 451–465. http://dx.doi.org/10.21776/csefb.2022.01.3.08
Komisi Pengawas Persaingan Usaha. (2023). *Peraturan Komisi Pengawas Persaingan Usaha Nomor 3 Tahun 2023 tentang Penilaian terhadap Penggabungan, Peleburan, atau Pengambilalihan Saham Perusahaan*. KPPU.
Komisi Pengawas Persaingan Usaha. (2026). *Penilaian: Penegakan hukum* (Artikel web). Diakses di https://kppu.go.id/penegakan-hukum/penilaian
Nugroho, G., & Darwanto. (2020). Analisis struktur pasar, perilaku perusahaan, dan kinerja perusahaan dalam industri telekomunikasi Indonesia. *MediaTrend: Berkala Kajian Ekonomi dan Studi Pembangunan*, 15(1), 97–110.
Nugroho, R., & Setyawati, I. (2016). Analisis struktur, konsentrasi, dan efisiensi pasar industri telekomunikasi di Indonesia. *Media Ekonomi*, 24(2). [suspicious link removed]
Octasylva, A. R. P., & Rurianto, J. (2020). Analisis industri telekomunikasi seluler di Indonesia: Pendekatan SCP (Structure Conduct Performance). *INOBIS: Jurnal Inovasi Bisnis dan Manajemen Indonesia*, 3(3), 391–408. https://doi.org/10.31842/jurnalinobis.v3i3.146
Penulis Jurnal Persaingan Usaha. (2021). Analisis hukum kompetisi terhadap "Big Data" dan doktrin "essential facility" dalam transaksi merger di Indonesia. *Jurnal Persaingan Usaha*, 1(1). https://jurnal.kppu.go.id/index.php/official/article/view/14
PT Bursa Efek Indonesia. (2026). *Daftar saham* (Artikel web). Diakses di https://www.idx.co.id/id/data-pasar/data-saham/daftar-saham
Rekarti, E. (2016). Dampak kebijakan merger bank Persero-BPD terhadap struktur pasar dan kinerja perbankan Indonesia. *Jurnal Ilmiah Manajemen dan Bisnis*, Universitas Mercu Buana. https://publikasi.mercubuana.ac.id/index.php/jimb/article/download/3689/1900
Rijanto, Y. A. (2015). Financial flexibility in highly regulated market: Indonesian telecommunication case during tariff pricing war. *International Research Journal of Business Studies*, 8(2), 123–135. https://doi.org/10.21632/irjbs.8.2.123-135
Riyadi & Deddy. (2005). *Perencanaan Pembangunan Daerah*. Jakarta: PT Gramedia Pustaka Utama.
Sa'diya, F. A., & Yuliaty, E. (2019). *Analisis Dampak Perang Tarif terhadap Kinerja Perusahaan dan Kinerja Pasar pada Perusahaan Telekomunikasi Tahun 2016–2018* (Skripsi/Tesis/Disertasi, Universitas 17 Agustus 1945 Surabaya). Universitas 17 Agustus 1945 Surabaya.
Selular.id. (2025, Januari). *Jalan panjang Smartfren sebelum melebur dengan XL Axiata* (Artikel web). Diakses di https://selular.id/2025/01/jalan-panjang-smartfren-sebelum-melebur-dengan-xl-axiata-bisa-bertahan-karena-dukungan-sinar-mas-group/
Setiawan, B. (2025). Persaingan operator seluler di era pasca-perang tarif: Studi kepemilikan dan strategi Telkomsel. *Gemilang: Jurnal Manajemen dan Akuntansi*, 6(1). https://jurnal-stiepari.ac.id/index.php/gemilang/article/download/3407/2795/14466
Wibowo, M., Kurnia, S., Hastuti, W., & Gustina, E. (2019). Inisiasi PIK R di Desa Argorejo, Kecamatan Sedayu, Kabupaten Bantul, Yogyakarta. *Prosiding Seminar Nasional Hasil Pengabdian Kepada Masyarakat Universitas Ahmad Dahlan*, (September), 421–428. Universitas Ahmad Dahlan. Retrieved from http://seminar.uad.ac.id/index.php/senimas/article/view/2136

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