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Resource Dependency, Regional Inequality, and Sustainable Development in East Kalimantan: Evidence from Indonesia's New Capital Region

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ABSTRACT

This study examines the intricate relationship between resource dependency, regional inequality, and sustainable development in East Kalimantan following Indonesia's decision to relocate its capital to Nusantara. Employing qualitative methodology through document analysis, semi-structured elite interviews, and comparative case examination, this research investigates how decades of extractive industries have shaped regional disparities and whether the new capital initiative can catalyze sustainable transformation. Empirical evidence from 2023–2025 reveals paradoxical outcomes: while East Kalimantan contributes substantially to national revenue through coal and palm oil exports, regional development indicators demonstrate persistent inequality, with Gini coefficients ranging from 0.38 to 0.42 across districts. Infrastructure investment surged 340% between 2022 and 2024, yet benefits concentrate in Penajam Paser Utara and Kutai Kartanegara, leaving resource-rich peripheral districts underserved. Analysis demonstrates that resource curse mechanisms—including Dutch disease effects, institutional weaknesses, and rent-seeking behaviors—continue undermining equitable development despite massive capital flows. The study identifies critical pathways toward sustainable transformation: diversification beyond extractive sectors, strengthening local governance capacity, implementing benefit-sharing mechanisms, and integrating environmental safeguards into regional planning. Findings contribute to theoretical debates on resource-dependent development and offer practical implications for emerging economies navigating similar transitions. The research underscores that without deliberate policy interventions addressing structural inequalities, infrastructure-led development risks replicating rather than resolving historical imbalances.

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1. INTRODUCTION

Indonesia's unprecedented decision in 2019 to relocate its capital from Jakarta to East Kalimantan represents one of the most ambitious national development projects in contemporary Asia. The new capital, officially named Nusantara, occupies 256,000 hectares spanning Penajam Paser Utara and Kutai Kartanegara districts, with projected investment exceeding USD 33 billion through 2045 (National Development Planning Agency, 2023). This monumental undertaking occurs within a province paradoxically characterized by extraordinary natural resource wealth yet persistent socioeconomic challenges, raising fundamental questions about development trajectories in resource-dependent regions.

East Kalimantan has long served as Indonesia's resource powerhouse, contributing 23.4% of national coal production and 18.7% of crude palm oil output in 2024 (Statistics Indonesia, 2024). Provincial GDP reached IDR 752.8 trillion (USD 48.6 billion) in 2023, ranking fourth nationally, with extractive industries constituting 41.2% of regional economic output (Bank Indonesia,

2024). Despite this apparent prosperity, regional development remains deeply uneven. The Human Development Index (HDI) varies dramatically across districts, from 82.34 in Balikpapan to 66.12 in Mahakam Ulu, while poverty rates span 4.23% to 11.84% (Statistics Indonesia, 2024). This disparity exemplifies the "resource curse" phenomenon wherein natural wealth fails to translate into broad-based development.

The capital relocation initiative introduces transformative dynamics into this complex landscape. Between 2022 and 2024, infrastructure investment in East Kalimantan increased from IDR 18.7 trillion to IDR 82.3 trillion, representing 340% growth (Ministry of Public Works, 2024). Transportation networks, energy systems, water infrastructure, and digital connectivity have expanded rapidly around the capital zone. However, critical concerns emerge regarding whether these investments will catalyze inclusive regional transformation or exacerbate existing inequalities by concentrating benefits spatially and socially.

Theoretical frameworks on resource dependency suggest that natural resource abundance often correlates negatively with economic diversification, institutional quality, and equitable development (Sachs & Warner, 2001; Ross, 2015). Empirical studies from resource-rich regions globally demonstrate how extractive industries can undermine sustainable development through environmental degradation, governance challenges, and social fragmentation (Bebbington & Bury, 2023; Bridge, 2008). Yet counterexamples exist where resource wealth has been strategically deployed for transformative development, suggesting that outcomes depend critically on governance arrangements, policy choices, and institutional capacities (Cherp et al., 2024).

This research addresses significant gaps in understanding how mega-infrastructure projects interact with resource dependency patterns in shaping regional development trajectories. Existing literature on Indonesia's capital relocation predominantly focuses on environmental impacts, architectural planning, or national political economy (Arifin et al., 2023; Koop & Waluyo, 2023), while studies of East Kalimantan's resource sectors typically examine specific commodities without analyzing broader development implications (Obidzinski et al., 2023). Few studies systematically investigate how historical resource dependency influences contemporary inequality patterns and whether current policy interventions can achieve sustainable transformation.

This study asks: How does resource dependency shape regional inequality in East Kalimantan, and what pathways exist toward sustainable development following capital relocation? Specifically, the research examines three interrelated questions: First, how have extractive industries structured regional economic geography and inequality patterns? Second, what impacts has capital relocation investment generated across different districts and social groups? Third, what institutional arrangements and policy interventions could promote more equitable and sustainable development trajectories?

The analysis employs qualitative methodology integrating document analysis, elite interviews with government officials and development practitioners, and comparative examination of district-level development patterns. Empirical evidence drawn from official statistics, policy documents, and field observations conducted between 2023 and 2025 provides current insights into rapidly evolving dynamics. Findings demonstrate that while infrastructure investment creates opportunities, structural transformation requires deliberate interventions addressing governance capacity, benefit distribution mechanisms, economic diversification, and environmental sustainability.

2. LITERATURE REVIEW

2.1 Resource Dependency and Development Paradoxes

Scholarly debate on resource-dependent development centers on the "resource curse" hypothesis, which posits that natural resource abundance often correlates with slower economic growth, weaker institutions, and heightened conflict risk (Sachs & Warner, 2001). Contemporary research has refined this perspective, demonstrating that outcomes depend critically on governance quality, economic diversification strategies, and benefit distribution mechanisms rather than resource endowment per se (Cherp et al., 2024; Venables, 2016).

Transmission mechanisms through which resource dependency undermines development include Dutch disease effects, where resource export revenues appreciate real exchange rates and diminish manufacturing competitiveness (Corden & Neary, 1982); rent-seeking behaviors that distort institutional development and policy priorities (Mehlum et al., 2006); volatility exposure as commodity price fluctuations destabilize fiscal planning and economic activity (van der Ploeg & Poelhekke, 2017); and crowding-out effects where extractive sectors absorb investment, talent, and policy attention at the expense of diversification (Ross, 2015).

Empirical evidence from resource-rich regions demonstrates varied outcomes. Norway and Botswana successfully leveraged resource wealth through sovereign wealth funds, transparent governance, and strategic diversification (Cherp et al., 2024). Conversely, Nigeria, Venezuela, and the Democratic Republic of Congo experienced persistent underdevelopment despite vast resource endowments, attributed to governance failures, corruption, and elite capture (Bebbington & Bury, 2023). Southeast Asian cases present mixed patterns: Malaysia achieved substantial industrialization despite resource dependency, while Indonesia exhibits uneven outcomes across provinces (Obidzinski et al., 2023).

Recent scholarship emphasizes that resource sectors' developmental impacts depend on linkage creation forward linkages processing raw materials domestically, backward linkages supplying inputs locally, and fiscal linkages channeling revenues into productive investments (Morris et al., 2012). Bridge (2008) argues that extractive industries inherently generate uneven geographical

development through localized environmental impacts, spatially concentrated employment, and selective infrastructure investment favoring resource corridors over peripheral areas.

2.2 Regional Inequality in Resource-Dependent Economies

Regional inequality constitutes a persistent challenge in resource-dependent economies, where extractive activities concentrate benefits spatially while distributing costs broadly (Hamann & Acutt, 2003). Geographical theories of uneven development explain how resource extraction creates enclave economies with limited linkages to surrounding regions, generating prosperity pockets amid widespread underdevelopment (Harvey, 2006; Smith, 2008).

Indonesian scholarship documents profound regional disparities despite national economic growth. Akita and Lukman (2023) demonstrate that resource-rich provinces, including East Kalimantan, exhibit higher inter-district inequality than resource-poor regions, attributed to the spatial concentration of extractive industry benefits. Resosudarmo and Jotzo (2023) analyze fiscal decentralization impacts, finding that resource revenue sharing has not substantially reduced regional inequality due to weak local governance capacity and limited diversification strategies.

Infrastructure investment can either ameliorate or exacerbate regional inequality depending on spatial distribution and accessibility (Rodríguez-Pose & Storper, 2024). Mega-projects risk concentrating benefits in core areas while peripheralizing outlying districts, particularly when planning processes exclude marginalized communities (Savini & Aalbers, 2023). Indonesian infrastructure development has historically favored Java and urban centers, contributing to persistent spatial inequality (Wardhana et al., 2023).

Extractive industries' local impacts vary substantially. Communities hosting extraction sites may receive employment and infrastructure benefits but often bear disproportionate environmental and social costs, including land displacement, pollution, and cultural disruption (Bebbington & Bury, 2023). Benefit distribution depends critically on corporate social responsibility practices, regulatory enforcement, and community bargaining capacity (Hilson, 2023). Indigenous and marginalized groups frequently experience exclusion from benefit-sharing while facing acute negative impacts (Sawyer & Gomez, 2023).

2.3 Sustainable Development in Transition Contexts

Sustainable development frameworks emphasize balancing economic growth, social equity, and environmental integrity across temporal and spatial scales (United Nations, 2015). The Sustainable Development Goals (SDGs) articulated in 2015 provide globally recognized benchmarks encompassing poverty reduction, inequality mitigation, environmental protection, and governance strengthening (Sachs et al., 2023).

Transition contexts—characterized by rapid structural change, major policy shifts, or transformative infrastructure development—present both opportunities and risks for sustainable development (Geels et al., 2023). Indonesia's capital relocation exemplifies such transitions, creating possibilities for reimagining development models while risking path dependency replication. Scholarly analysis emphasizes that transitions require deliberate governance arrangements, including stakeholder participation, adaptive management, and institutional innovation (Patterson et al., 2024).

Environmental sustainability constitutes a critical dimension given East Kalimantan's ecological significance. The province contains substantial tropical rainforest, recognized biodiversity hotspots, and critical carbon stocks (Margono et al., 2023). Extractive industries have driven extensive deforestation, with palm oil plantations and coal mining causing habitat loss, soil degradation, and water pollution (Austin et al., 2023). Capital construction and associated urbanization introduce additional environmental pressures, including increased energy demand, waste generation, and ecosystem fragmentation (Arifin et al., 2023).

Climate change considerations add urgency to sustainable development imperatives. Indonesia is committed to reducing greenhouse gas emissions 29% unconditionally and 41% conditionally by 2030 relative to business-as-usual scenarios (Ministry of Environment and Forestry, 2023). East Kalimantan's development trajectory significantly influences national climate targets, given the province's emissions profile dominated by land-use change and fossil fuel extraction (Busch et al., 2023).

2.4 Theoretical Framework

This research employs an integrated theoretical framework combining resource dependency theory, geographical political economy, and sustainable development perspectives. Resource dependency theory illuminates how extractive industry dominance shapes economic structures, institutional arrangements, and development constraints (Ross, 2015). Geographical political economy explains spatial inequality production through uneven capital accumulation, selective infrastructure investment, and place-specific power relations (Harvey, 2006; Bridge, 2008). Sustainable development frameworks provide normative benchmarks and analytical tools for assessing equity, environmental integrity, and long-term viability (Sachs et al., 2023).

The framework recognizes that development outcomes emerge from interactions among economic structures, governance institutions, social relations, and environmental systems. Historical resource dependency creates path dependencies influencing contemporary possibilities, yet transformative transitions remain achievable through deliberate interventions restructuring these interdependencies. Capital relocation represents a critical juncture, potentially catalyzing either sustainable transformation or inequality reproduction depending on policy choices and institutional arrangements implemented.

3. METHODOLOGY

3.1 Research Design

This study employs qualitative methodology integrating multiple methods to examine complex relationships among resource dependency, regional inequality, and sustainable development. Qualitative approaches suit investigations of intricate social phenomena, enabling rich contextual understanding and exploration of causal mechanisms beyond statistical correlation (Creswell & Poth, 2018). The research design combines document analysis, semi-structured elite interviews, and comparative case examination across East Kalimantan districts.

3.2 Data Collection

Document Analysis: Extensive analysis of official statistics, policy documents, development plans, environmental impact assessments, and academic publications provided quantitative indicators and policy context. Primary sources included Statistics Indonesia (*Badan Pusat Statistik*) provincial and district publications; National Development Planning Agency (*Bappenas*) reports on capital development; Ministry of Energy and Mineral Resources data on coal production; Ministry of Agriculture statistics on palm oil; Bank Indonesia regional economic reports; and environmental monitoring reports from the Ministry of Environment and Forestry. Documents spanning 2020–2025 captured recent trends and policy shifts.

Elite Interviews: Semi-structured interviews with 18 key informants provided insider perspectives on governance processes, development challenges, and policy dynamics. Informants included provincial planning officials (n=4), district government representatives (n=5), Nusantara Capital Authority staff (n=3), development practitioners from international organizations (n=3), and civil society representatives (n=3). Interviews conducted between August 2023 and January 2025 explored themes including development planning processes, resource revenue utilization, inequality perceptions, environmental concerns, and policy recommendations. Interview protocols received ethical approval and maintained participant confidentiality.

Field Observations: Site visits to four districts, Penajam Paser Utara, Kutai Kartanegara, Kutai Timur, and Mahakam Ulu, during 2024 enabled direct observation of infrastructure development, environmental conditions, and community contexts. Observations complemented documentary and interview data by providing a grounded understanding of development realities.

3.3 Data Analysis

Analysis employed thematic coding techniques, identifying patterns across data sources (Braun & Clarke, 2022). Initial coding organized data around key themes: resource dependency manifestations, inequality patterns, infrastructure impacts, governance challenges, environmental concerns, and development pathways. Subsequent analytical coding explored relationships among themes, identifying mechanisms linking resource dependency to inequality and factors enabling or constraining sustainable development.

Comparative analysis across districts examined how development impacts vary spatially, revealing concentration patterns and marginalization dynamics. Triangulation across document analysis, interviews, and observations enhanced validity by corroborating findings through multiple evidence sources (Denzin, 2017).

Quantitative data from official sources underwent descriptive statistical analysis, calculating trends, distributions, and disparities. Tables present empirical indicators systematically, enabling pattern identification and comparative assessment.

3.4 Limitations

Several limitations warrant acknowledgment. First, reliance on official statistics may underestimate informal economic activity and underreport environmental degradation, potentially understating development challenges. Second, elite interview sampling privileges government and institutional perspectives over grassroots community voices, though civil society representatives partially mitigate this bias. Third, rapid change characterizing capital development means findings represent snapshots of evolving situations requiring ongoing research. Fourth, language barriers limited direct community engagement, necessitating reliance on translated documents and interpreter-mediated interviews. Despite these limitations, methodological triangulation and contextual grounding provide robust evidence for analysis.

4. RESULTS

4.1 Resource Dependency Patterns and Economic Structure

East Kalimantan's economy exhibits profound resource dependency, with extractive industries dominating production, employment, and export profiles. Table 1 presents sectoral GDP composition, demonstrating the dominance of mining and agriculture.

Table 1: East Kalimantan GDP by Sector, 2022-2024 (Percent of Total GDP)

Sector	2022	2023	2024
Mining & Quarrying	38.7	41.2	39.8
Agriculture, Forestry, Fishing	12.6	11.8	11.3
Manufacturing	14.3	13.9	14.1

Construction	8.9	9.7	11.2
Trade & Hospitality	11.2	10.8	10.6
Transportation & Storage	5.8	5.3	5.4
Other Services	8.5	7.3	7.6
Total GDP (IDR Trillion)	**689.4**	**752.8**	**798.2**

Source: Statistics Indonesia (2024); Bank Indonesia (2024)

Mining constitutes approximately 40% of provincial GDP consistently across 2022–2024, demonstrating persistent dependency despite capital-related construction growth. Combined extractive sectors (mining plus agriculture/forestry) exceed 50% of economic output. Manufacturing remains modest at 14%, predominantly processing raw materials rather than producing diversified industrial goods. Coal production reached 252.6 million tons in 2024, generating export revenues exceeding USD 18.7 billion (Ministry of Energy and Mineral Resources, 2024). Crude palm oil production totaled 4.8 million tons valued at USD 5.2 billion (Ministry of Agriculture, 2024). These commodities dominate provincial exports, creating significant vulnerability to global price fluctuations.

Interview data revealed concern regarding limited economic diversification. A provincial planning official stated, "We recognize overdependence on coal and palm oil. Capital development offers opportunities for service sector growth, but without strategic intervention, we risk merely adding construction dependency atop existing resource dependency" (Interview, September 2023).

4.2 Regional Inequality Dimensions

Profound inequality characterizes East Kalimantan's development landscape across multiple dimensions. Table 2 presents key indicators across districts, revealing stark disparities.

Table 2: Regional Development Indicators by District, 2024

District	HDI	Gini Coefficient	Poverty Rate (%)	GDP per Capita (Million IDR)
Balikpapan	82.34	0.38	4.23	178.3
Samarinda	80.12	0.39	5.67	145.2
Kutai Kartanegara	74.58	0.42	6.84	312.7
Penajam Paser Utara	72.46	0.41	7.32	98.4
Kutai Timur	71.23	0.40	8.15	187.6
Berau	70.89	0.39	7.91	134.8
Paser	69.54	0.38	9.23	67.3
Kutai Barat	68.47	0.40	9.87	89.1
Mahakam Ulu	66.12	0.37	11.84	52.6
Provincial Average	**73.97**	**0.39**	**7.89**	**140.7**

Source: Statistics Indonesia (2024); Regional Development Index Report (2024)

HDI ranges from 82.34 (Balikpapan) to 66.12 (Mahakam Ulu), spanning 16.22 points, substantially greater than the national average inter-district variation of 11.3 points (Statistics Indonesia, 2024). Resource-rich Kutai Kartanegara exhibits the highest GDP per capita (IDR 312.7 million) yet moderate HDI (74.58) and elevated inequality (Gini 0.42), exemplifying resource curse dynamics where wealth fails to translate into broad human development.

Poverty rates demonstrate inverse correlation with urbanization and infrastructure access. Peripheral districts, including Mahakam Ulu, Kutai Barat, and Paser, experience poverty rates exceeding 9%, double Balikpapan's 4.23%. Interview respondents from civil society organizations highlighted that official poverty statistics underestimate hardship: "Poverty measures miss quality dimensions. Many families technically above poverty lines lack reliable electricity, clean water, healthcare access, or educational opportunities" (Interview, November 2024).

Infrastructure disparities compound socioeconomic inequality. Table 3 presents infrastructure access indicators demonstrating spatial concentration.

Table 3: Infrastructure Access by District, 2024

District	Paved Roads (%)	Electricity Access (%)	Clean Water Access (%)	Internet Penetration (%)
Balikpapan	94.7	99.8	96.3	78.4
Samarinda	89.2	99.2	93.7	72.1
Kutai Kartanegara	76.4	97.3	87.2	64.8
Penajam Paser Utara	71.8	95.6	84.6	67.3

Kutai Timur	63.2	91.4	78.9	53.2
Berau	58.7	89.7	76.4	49.6
Paser	54.3	87.2	72.1	45.8
Kutai Barat	49.8	83.6	67.8	38.4
Mahakam Ulu	41.2	78.3	61.2	31.7

Source: Ministry of Public Works (2024); Statistics Indonesia (2024)

Urban centers, Balikpapan and Samarinda, enjoy near-universal electricity and extensive paved roads, while remote Mahakam Ulu accesses paved roads 41.2% and internet 31.7%. Infrastructure investment accompanying capital development concentrates in Penajam Paser Utara and Kutai Kartanegara corridors, widening gaps with peripheral districts.

4.3 Capital Relocation Impacts

Capital development generated a massive infrastructure investment surge. Table 4 documents investment flows demonstrating concentration patterns.

Table 4: Infrastructure Investment by District, 2022-2024 (IDR Trillion)

District	2022	2023	2024	2022-2024 Growth (%)
Penajam Paser Utara	3.8	24.7	47.3	1,145
Kutai Kartanegara	4.2	16.3	22.8	443
Balikpapan	6.1	9.8	8.4	38
Samarinda	2.7	4.2	2.9	7
Other Districts (Combined)	1.9	2.4	0.9	-53
Provincial Total	**18.7**	**57.4**	**82.3**	**340**

Source: Ministry of Public Works (2024); Nusantara Capital Authority (2024)

Penajam Paser Utara experienced an extraordinary 1,145% investment increase, receiving 57.5% of 2024 provincial infrastructure spending despite constituting merely 8.2% of the population. Kutai Kartanegara captured 27.7% of the investment. Combined, capital zone districts received 85.2% of provincial infrastructure investment while other districts faced stagnation or decline.

Infrastructure projects include toll roads connecting Balikpapan-Samarinda-Nusantara (total 87 km), new airport terminal expansion, port development, water treatment facilities serving 400,000 people, electricity generation capacity additions (650 MW), and digital infrastructure deployment. These investments transform capital zone connectivity and services dramatically.

However, benefits are distributed unevenly within the capital zone. An interview with a district planning official revealed: "Construction employment primarily goes to migrants with technical skills. Local communities gain some service sector jobs, but often in informal, low-wage positions. Land compensation remains contentious with many families feeling inadequately compensated despite official processes" (Interview, June 2024).

Environmental concerns intensified as capital construction accelerated deforestation. Ministry of Environment and Forestry (2024) monitoring documented 12,400 hectares of forest loss in the capital zone between 2020 and 2024, predominantly conversion to construction sites and supporting infrastructure. Water quality monitoring detected increased turbidity and sedimentation in rivers serving downstream communities (Environmental Management Agency, 2024).

4.4 Governance and Institutional Challenges

Governance capacity emerged as a critical constraint on equitable, sustainable development. Interview data revealed multiple institutional weaknesses:

Coordination Deficits: Capital development involves multiple agencies—Nusantara Capital Authority, provincial government, district governments, and line ministries—with overlapping jurisdictions and insufficient coordination mechanisms. A development practitioner observed: "Different agencies pursue separate agendas without integrated planning. Infrastructure projects lack environmental safeguard coordination, resulting in duplicative impacts and missed mitigation opportunities" (Interview, October 2024).

Accountability Gaps: Resource revenue transparency remains limited despite legal requirements. Several districts failed to publish required financial reports, hindering public oversight (Interview with civil society representative, November 2024). Corruption perceptions remain elevated, with Transparency International Indonesia (2024) ranking East Kalimantan 24th among 34 provinces on governance quality indicators.

Participatory Planning Limitations: Community consultation processes are frequently superficial, privileging elite voices over marginalized groups, including indigenous communities and women. Civil society representatives reported: "Public consultations

occur after major decisions are finalized, offering communities no genuine influence over project design or benefit distribution" (Interview, December 2024).

Capacity Constraints: Technical capacity for sustainable development planning varies dramatically across districts. Peripheral districts lack staff with environmental assessment, participatory planning, or economic diversification expertise, limiting effective policy implementation (Interview with district official, August 2024).

5. DISCUSSION

5.1 Resource Curse Mechanisms in the East Kalimantan Context

Evidence demonstrates that classical resource curse mechanisms operate powerfully in East Kalimantan despite substantial resource wealth. Dutch disease effects manifest through manufacturing stagnation at 14% GDP despite infrastructure investment and available capital. Extractive sector dominance crowds out industrial diversification, with coal and palm oil industries absorbing investment, skilled labor, and policy attention.

Rent-seeking behaviors distort governance, with resource revenues creating incentives for elite capture rather than productive investment. Interview data revealed widespread perceptions that resource licensing and revenue allocation involve patronage networks privileging connected elites over development effectiveness. This aligns with Mehlum et al. (2006) findings that governance quality determines whether resource wealth becomes a curse or a blessing.

Fiscal volatility from commodity price fluctuations undermines planning stability. Coal prices fluctuated from USD 150/ton (2022) to USD 78/ton (2024), causing budget turbulence and constraining long-term investment (Ministry of Energy and Mineral Resources, 2024). Districts heavily dependent on mining revenues face acute fiscal pressure during downturns. Environmental degradation from extractive industries imposes long-term development costs through ecosystem service loss, health impacts, and reduced resilience. Deforestation rates averaging 42,000 hectares annually during 2020-2024 destroyed critical habitats and increased flooding vulnerability (Ministry of Environment and Forestry, 2024), consistent with Bridge's (2008) analysis of extraction's inherently uneven geographical impacts.

5.2 Spatial Inequality Reproduction through Infrastructure Development

Capital-related infrastructure investment risks reproducing rather than resolving historical inequalities through concentration in already-advantaged districts. Penajam Paser Utara and Kutai Kartanegara received 85.2% of provincial infrastructure spending, widening gaps with peripheral districts lacking comparable investment.

This pattern exemplifies theoretical insights on uneven geographical development (Harvey, 2006; Smith, 2008), whereby capital accumulation concentrates spatially through agglomeration economies, infrastructure networks favoring core regions, and political economy privileging areas with elite influence. Rodríguez-Pose and Storper (2024) demonstrate that mega-projects frequently exacerbate regional inequality unless accompanied by deliberate redistribution mechanisms—precisely what East Kalimantan lacks.

Peripheral districts, including Mahakam Ulu, Kutai Barat, and Paser, experience marginalization through infrastructure neglect, limited public services, and exclusion from capital-related opportunities. This spatial inequality intersects with ethnic dimensions, as indigenous Dayak communities predominantly inhabit peripheral areas facing underdevelopment while migrant-dominated urban centers and resource corridors prosper.

Interview data revealed frustration among peripheral district officials: "Capital development creates opportunities, but only for those geographically proximate. Our districts continue to be neglected despite contributing resources to provincial development. We lack roads, electricity, healthcare, education infrastructure promised for decades" (Interview with district official, Mahakam Ulu, August 2024).

5.3 Sustainable Development Challenges and Opportunities

Capital relocation presents contradictory implications for sustainable development. Optimistically, massive investment creates possibilities for green infrastructure, renewable energy deployment, public transportation systems, and planned urban development, avoiding Jakarta's chaos. Nusantara's master plan incorporates sustainability rhetoric, including 75% green space, renewable energy targets, and ecosystem conservation (Nusantara Capital Authority, 2023).

However, implementation faces severe challenges. Construction-driven deforestation contradicts conservation commitments, with 12,400 hectares of forest loss undermining biodiversity and carbon storage. Energy infrastructure is predominantly fossil fuel-based despite renewable rhetoric, with coal-fired capacity additions exceeding solar deployment (Ministry of Energy and Mineral Resources, 2024). Transportation infrastructure prioritizes roads over public transit, locking in automobile dependence and emissions.

Environmental governance capacity remains weak. Environmental impact assessments are often perfunctory, with limited independent oversight or enforcement (Interview with environmental practitioner, October 2024). Ministry of Environment and Forestry (2024) monitoring reveals compliance violations in 37% of assessed projects, yet penalty enforcement remains minimal.

Social sustainability challenges include inadequate benefit-sharing with affected communities, displacement without sufficient livelihood restoration, and exclusion of marginalized groups from decision-making. Indigenous communities reported

land conflicts as expansion encroaches traditional territories without free, prior, informed consent processes (Interview with indigenous representative, December 2024), consistent with global patterns documented by Sawyer and Gomez (2023).

Climate vulnerability adds urgency. East Kalimantan faces increasing flood, drought, and fire risks from climate change (Ministry of Environment and Forestry, 2023), yet adaptation planning remains nascent. Capital infrastructure lacks climate-resilient design standards, creating long-term vulnerability.

5.4 Pathways Toward Equitable, Sustainable Transformation

Evidence suggests that achieving equitable, sustainable development requires comprehensive interventions across multiple dimensions:

Economic Diversification: Deliberate industrial policy promoting manufacturing, technology sectors, sustainable tourism, and renewable energy can reduce resource dependency. Interview respondents emphasized processing industries adding value to raw materials rather than exporting commodities. Successful examples include Malaysia's transition from rubber/tin exports to electronics manufacturing (Cherp et al., 2024).

Benefit-Sharing Mechanisms: Transparent resource revenue allocation ensuring peripheral districts receive adequate funding for development needs. Norway's petroleum revenue distribution offers an instructive model, combining sovereign wealth fund savings with equitable transfers supporting lagging regions (Cherp et al., 2024). East Kalimantan requires legal frameworks mandating resource revenue redistribution, addressing historical imbalances.

Governance Strengthening: Enhancing transparency, accountability, and participation through open budgeting, independent oversight institutions, and genuine community consultation. Civil society capacity building enables effective monitoring and advocacy. Anti-corruption efforts must address rent-seeking, undermining development effectiveness.

Environmental Safeguards: Rigorous environmental assessment, meaningful public participation, and robust enforcement, preventing ecosystem degradation. Protected area expansion, restoration programs, and sustainable land-use planning can balance development with conservation. Climate adaptation integration into infrastructure design enhances resilience.

Inclusive Planning: Centering marginalized communities, including indigenous peoples, women, and informal workers, in development planning through participatory processes respecting diverse knowledge systems. Free, prior, informed consent standards for projects affecting indigenous territories. Gender-responsive budgeting addresses women's specific needs and priorities.

Spatial Equity: Infrastructure investment explicitly prioritizing peripheral districts, narrowing gaps rather than concentrating in advantaged areas. Rural development programs are improving agricultural productivity, market access, and services. Targeted transfers supporting lagging regions in achieving minimum service standards.

Interview with development practitioner synthesized: "Capital relocation creates unprecedented opportunities, but outcomes depend entirely on governance choices. Without deliberate equity, sustainability, and participation commitments backed by institutional capacity and political will, we risk merely creating new centers of inequality atop old ones. Transformation requires systemic change, not just infrastructure" (Interview, January 2025).

5.5 Theoretical and Practical Implications

Findings contribute to theoretical debates on resource-dependent development, demonstrating that resource curse outcomes persist even amid massive infrastructure investment without governance reforms addressing structural inequalities. This underscores that infrastructure alone cannot overcome resource curse mechanisms; institutional quality, diversification strategies, and equity commitments prove equally critical.

Geographical political economy insights receive strong empirical support, with capital accumulation concentrating spatially through infrastructure investment patterns, privileging core regions. Uneven development reproduces through deliberate policy choices rather than inevitable economic forces, highlighting political dimensions of regional inequality.

Sustainable development frameworks require contextualization within resource-dependent settings. Environmental sustainability cannot be pursued independently from equity and governance dimensions. Effective sustainability interventions must address power relations, benefit distribution, and institutional capacity comprehensively.

Practical implications suggest that emerging economies planning major infrastructure projects should:

1. Conduct comprehensive inequality impact assessments, identifying distributional consequences ex ante
2. Design explicit redistribution mechanisms ensuring peripheral regions benefit
3. Strengthen governance capacity for integrated planning, environmental safeguards, and participatory processes
4. Prioritize economic diversification alongside infrastructure investment
5. Center marginalized communities in planning through genuine participatory mechanisms
6. Integrate climate resilience and environmental protection as non-negotiable priorities

These lessons extend beyond Indonesia, offering insights for resource-dependent regions globally, navigating development transitions.

6. CONCLUSION

This research examined relationships among resource dependency, regional inequality, and sustainable development in East Kalimantan following Indonesia's capital relocation decision. Findings demonstrate that despite extraordinary natural resource wealth and massive infrastructure investment, profound inequalities persist through mechanisms including resource curse dynamics, spatial concentration of development benefits, governance weaknesses, and environmental degradation.

East Kalimantan's economy remains profoundly resource-dependent, with extractive industries constituting over 50% of GDP and dominating exports. This dependency generates volatility, crowds out diversification, and creates governance challenges through rent-seeking incentives. Regional inequality manifests across HDI, poverty, infrastructure access, and investment distribution, with peripheral districts systematically marginalized relative to urban centers and the capital zone.

Capital relocation generated unprecedented infrastructure investment surge—340% increase between 2022-2024 yet benefits concentrate overwhelmingly in Penajam Paser Utara and Kutai Kartanegara, receiving 85% of provincial spending. This spatial concentration risks exacerbating rather than resolving historical inequalities. Environmental pressures intensified through construction-driven deforestation and inadequate safeguard implementation.

Governance challenges constitute critical constraints on equitable, sustainable development. Coordination deficits, accountability gaps, participatory planning limitations, and capacity constraints undermine effective policy implementation. Without governance reforms, infrastructure investment alone proves insufficient for transformative development.

Pathways toward sustainable transformation require comprehensive interventions: economic diversification beyond extractive sectors; transparent benefit-sharing mechanisms redistributing resource revenues equitably; governance strengthening through transparency, accountability, and participation; rigorous environmental safeguards preventing ecosystem degradation; inclusive planning centering marginalized communities; and spatial equity through infrastructure investment prioritizing peripheral districts.

Capital relocation represents a critical juncture presenting opportunities for reimagining regional development trajectories. However, realizing this potential demands deliberate policy interventions addressing structural inequalities, governance reforms enabling effective implementation, and political commitment prioritizing equity and sustainability over elite interests. Without such interventions, evidence suggests infrastructure-led development will reproduce historical patterns, concentrating benefits among advantaged groups and places while marginalizing peripheries.

Future research should examine longitudinal outcomes as capital development progresses, compare East Kalimantan's trajectory with other resource-rich Indonesian provinces, investigate community-level impacts through ethnographic methods centering marginalized voices, and analyze policy implementation effectiveness, assessing governance reforms. These investigations will deepen the understanding of development dynamics in resource-dependent regions navigating transformative transitions.

The study's significance extends beyond Indonesia, offering insights for resource-dependent emerging economies globally. As many nations pursue infrastructure-led development strategies, East Kalimantan's experience underscores that outcomes depend critically on governance quality, equity commitments, environmental safeguards, and inclusive planning processes. Infrastructure investment creates possibilities but guarantees nothing; deliberate institutional arrangements and policy interventions determine whether possibilities become equitable, sustainable realities.

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