DEVELOPMENT OF ECONOMIC SUPPORTING INFRASTRUCTURE IN THE NATION’S CAPITAL: A PROPOSAL USING A CROWDFUNDING SCHEME

Hangrengga Berlian, Bram Hertasning, Hibnu Nugroho, Decky Subarja, Azhari Aziz Samudra, Asropi

ABSTRACT

Objective: This research aims to provide proposals for a comprehensive policy framework and strategic plan to advance economic prosperity through infrastructure development in the New Capital Region of East Kalimantan, Indonesia.

Theoretical Framework: The theory used is crowdfunding from Kirby & Worner (2014). The crowdfunding model includes social crowdfunding communities, loans/donations, and reward crowdfunding. The financial benefits of crowdfunding encompass peer-to-peer (P2P) loans and equity crowdfunding.

Method: The method employed is a qualitative approach using interview discussions supported by participant observation. Twenty-two stakeholders, including policymakers and community members, participated in the study, providing diverse perspectives. The research takes place from September 16 to November 19, 2023, with the research locus in the city of IKN Nusantara.

Results and Conclusions: To comprehend the short-medium and long-term perspectives, these plans require innovative financing methodologies, such as crowdfunding, which is considered an essential element. In the short term, community involvement is targeted through SBSN, facilitating direct community participation in infrastructure funding. This medium-term strategy integrates digital platforms and blockchain technology, increasing transparency and strengthening public trust. A mixed creative financing model is recommended for public transport, aligning crowdfunding with Public-Private Partnerships. In the long term, this study highlights the growing maturity of crowdfunding and its potential positive influence on the infrastructure supporting the economy, setting a precedent that can be imitated in other regions in Indonesia.

Research Implications: In line with national aspirations to achieve advanced status by 2045, this proposal supports inclusive economic growth inspired by China’s expertise in optimizing domestic resources. The importance of the Open Government concept was underlined.
emphasizing community involvement to reduce foreign dependence and encourage sustainable economic growth.

**Originality/Value:** This research includes concrete actions, such as implementing Government Sharia Securities, blockchain integration, and targeted financial education campaigns, all aimed at ensuring the effectiveness and long-term success of infrastructure development in the Capital Region.

**Keywords:** infrastructure development, economic improvement, crowdfunding, inclusive economic growth, east kalimantan.

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DESENVOLVIMENTO DE INFRAESTRUTURA DE APOIO ECONÔMICO NA CAPITAL DO PAÍS: UMA PROPOSTA USANDO UM ESQUEMA DE CROWDFUNDING

**RESUMO**

**Objetivo:** Esta pesquisa visa fornecer propostas para um quadro político abrangente e plano estratégico para promover a prosperidade econômica através do desenvolvimento de infraestrutura na Região da Nova Capital de Kalimantan Oriental, Indonésia.

**Estrutura Teórica:** A teoria utilizada é crowdfunding de Kirby & Worner (2014). O modelo de crowdfunding inclui comunidades sociais de crowdfunding, empréstimos/doações e recompensas pelo crowdfunding. Os benefícios financeiros do financiamento colaborativo incluem empréstimos entre pares (P2P) e financiamento colaborativo através de capitais próprios.

**Método:** O método empregado é uma abordagem qualitativa que utiliza as discussões da entrevista suportadas pela observação do participante. Vinte e duas partes interessadas, incluindo formuladores de políticas e membros da comunidade, participaram do estudo, fornecendo diversas perspectivas. A pesquisa acontece de 16 de setembro a 19 de novembro de 2023, com o locus de pesquisa na cidade de IKN Nusantara.

**Resultados e Conclusões:** Para compreender as perspectivas de curto, médio e longo prazo, estes planos exigem metodologias de financiamento inovadoras, como o financiamento colaborativo, que é considerado um elemento essencial. A curto prazo, o envolvimento da comunidade é visado através do SBSN, facilitando a participação direta da comunidade no financiamento de infraestruturas. Esta estratégia a médio prazo integra plataformas digitais e tecnologia blockchain, aumentando a transparência e fortalecendo a confiança pública. Recomenda-se um modelo misto de financiamento criativo para os transportes públicos, alinhando o financiamento colaborativo com as parcerias público-privadas. A longo prazo, este estudo destaca a crescente maturidade do financiamento coletivo e sua potencial influência positiva na infraestrutura de apoio à economia, estabelecendo um precedente que pode ser imitado em outras regiões da Indonésia.

**Implicações da investigação:** Em consonância com as aspirações nacionais de alcançar um estatuto avançado até 2045, a presente proposta apoia o crescimento econômico inclusivo inspirado na experiência da China na otimização dos recursos nacionais. A importância do conceito de Governo Aberto foi sublinhada, enfatizando o envolvimento da comunidade para reduzir a dependência externa e incentivar o crescimento econômico sustentável.

**Originalidade/valor:** Esta pesquisa inclui ações concretas, tais como a implementação da Sharia Securities do governo, integração da blockchain e campanhas de educação financeira.
DESEARROLLO DE INFRAESTRUCTURAS DE APOYO ECONÓMICO EN LA CAPITAL DE LA NACIÓN: UNA PROPUESTA QUE UTILIZA UN SISTEMA DE CROWDFUNDING

RESUMEN

Objetivo: Esta investigación tiene como objetivo proporcionar propuestas para un marco de política integral y un plan estratégico para avanzar en la prosperidad económica a través del desarrollo de infraestructura en la Región de la Nueva Capital de Kalimantan Oriental, Indonesia.

Marco teórico: La teoría utilizada es el crowdfunding de Kirby & Worner (2014). El modelo de crowdfunding incluye comunidades de crowdfunding social, préstamos/donaciones y crowdfunding de recompensa. Los beneficios financieros del crowdfunding abarcan los préstamos peer-to-peer (P2P) y el crowdfunding de capital.

Método: El método empleado es un enfoque cualitativo que utiliza discusiones de entrevista apoyadas por la observación participante. En el estudio participaron 22 partes interesadas, incluidos responsables de la formulación de políticas y miembros de la comunidad, que aportaron perspectivas diversas. La investigación se lleva a cabo del 16 de septiembre al 19 de noviembre de 2023, con el locus de investigación en la ciudad de IKN Nusantara.

Resultados y conclusiones: Para comprender las perspectivas a corto-mediano y largo plazo, estos planes requieren metodologías de financiamiento innovadoras, como el crowdfunding, que se considera un elemento esencial. A corto plazo, la participación de la comunidad se dirige a través de SBSN, facilitando la participación directa de la comunidad en la financiación de la infraestructura. Esta estrategia a medio plazo integra las plataformas digitales y la tecnología blockchain, aumentando la transparencia y fortaleciendo la confianza pública. Se recomienda un modelo de financiación mixta y creativa para el transporte público, alineando la financiación colectiva con las asociaciones público-privadas. A largo plazo, este estudio destaca la creciente madurez del crowdfunding y su potencial influencia positiva en la infraestructura que apoya la economía, sentando un precedente que puede imitarse en otras regiones de Indonesia.

Implicaciones de la investigación: En línea con las aspiraciones nacionales de alcanzar un estatus avanzado para 2045, esta propuesta apoya el crecimiento económico inclusivo inspirado en la experiencia de China en la optimización de los recursos internos. Se subrayó la importancia del concepto de Gobierno Abierto, haciendo hincapié en la participación de la comunidad para reducir la dependencia extranjera y fomentar el crecimiento económico sostenible.

Originalidad/Valor: Esta investigación incluye acciones concretas, como la implementación de los valores de la Sharia del Gobierno, la integración de la cadena de bloques y campañas de educación financiera específicas, todas destinadas a garantizar la efectividad y el éxito a largo plazo del desarrollo de infraestructura en la Región Capital.

Palabras clave: desarrollo de infraestructura, mejora económica, crowdfunding, crecimiento económico inclusivo, kalimantan oriental.
1 BACKGROUND

Facing the challenge of Golden Indonesia 2045, the Indonesian Government strives for progress through infrastructure development as the key to economic growth. Infrastructure is the main focus, considering its strategic role in improving community welfare. Developing economically supportive infrastructure will directly impact economic growth and create multiplier effects, such as increasing employment opportunities and connectivity between regions.

Increasing inter-regional connectivity and community mobility are expected to drive economic values. Therefore, urgent needs include infrastructure projects such as railways, highways, airports, and ports. Comprehensive infrastructure projects have the potential to support communities and open up business opportunities and development in various sectors.

The positive impact of infrastructure development is reflected in the growth of regional GDP, new jobs, and increasingly open business opportunities. Infrastructure development also has two effects: direct effects involve the role of the private sector in increasing output without the need to change existing inputs. Meanwhile, indirect effects include economic stimulation, increasing private investment, increasing property values, enhancing economic productivity, regional development, improving quality of life, reducing logistics costs, and community empowerment.

The realization of equitable development throughout Indonesia is a priority, guided by the principles of Indonesia Centrism. One concrete initiative is the construction of a new national capital in East Kalimantan Province. It is hoped that the New Capital City will become a Pilot Project for a modern and sustainable city, positively impacting the supporting cities in the East Kalimantan region and inspiring other regions. Through this effort, there is an expectation of improving the community's quality of life and encouraging a more progressive and competitive socioeconomic transformation in line with the vision of Golden Indonesia 2045.

Developing economic infrastructure, though crucial, demands substantial investment. In 2024, the Indonesian Government has earmarked US$ 27 million in the 2024 Draft State Revenue and Expenditure Budget. The projected budget for the development of the National Capital City is estimated to be US$ 30 million. In order to
face fiscal constraints, a creative approach is needed that is useful for financing economic supporting infrastructure in the National Capital City (abbreviated as IKN).

While economic supporting infrastructure yields a significant economic impact, it necessitates substantial financial investment. Therefore, involving the private sector in infrastructure development is deemed crucial. As mentioned earlier, the private sector's role in infrastructure can enhance output without additional input from the government budget, making it a key driver for sustainable development.

The challenge lies in the high financial value of economically supporting infrastructure, which makes it challenging for the private sector to cover the costs entirely. Consequently, alternative creative financing approaches are imperative to prevent an undue increase in the Government's fiscal burden. One viable method that the Government can initiate is crowdfunding.

2 LITERATURE REVIEW

2.1 CROWDFUNDING AS A GLOBAL TREND

Crowdfunding is raising funds for a project or venture by collecting small amounts of money from many people, usually through online platforms or social media. It allows individuals, businesses, or organizations to present their ideas, products, or initiatives to a broad audience, and interested individuals, known as supporters or investors, can donate a certain amount of money to support the project (Wangchuk, 2021). Crowdfunding can be used for various purposes, including creative projects, startups, charitable activities, and, as in the previously mentioned context, infrastructure development. There are various crowdfunding models, such as rewards-based, equity-based, and debt-based, each of which has dynamics and implications for founders and project creators. Crowdfunding has gained popularity as a funding model, and its definition is shaped by collective understanding and use within communities of entrepreneurs, investors, and online platforms that facilitate crowdfunding campaigns.

Crowdfunding has emerged as a global phenomenon, witnessing significant growth in various regions. Notably, continental Europe experienced a remarkable 144% increase in crowdfunding in 2014 (Dibrova, 2016). This trend is also starting to be seen
in Asia, and China is a prime example of crowdfunding that has successfully funded projects ranging from agriculture to tourism.

In 2017, the funds raised through crowdfunding in China amounted to a staggering USD 1.38 billion, equivalent to approximately US$ 127.5 billion (Xiao, 2016). Despite starting relatively late in 2013, as Huang et al. (2018) and Funk (2019) noted, crowdfunding has proven to be a robust solution amid volatile economic conditions. The Chinese Government's acknowledgment that formal finance alone cannot meet comprehensive financial needs has led to adopting crowdfunding and other financial innovations as practical solutions (Yasar, 2021).

The crowdfunding landscape in China has evolved into distinct models, namely investment-based crowdfunding, non-investment-based crowdfunding, and integrated models (Huang et al., 2018). Investment-based crowdfunding encompasses equity and property, while non-investment-based crowdfunding involves donations or philanthropic activities. It is crucial to highlight that China experienced a state budget deficit before 2018. However, the Chinese Government successfully transitioned to a surplus through financial sector reforms. This achievement underscores the significant contribution of financial sector reforms to maintaining a healthy State Budget.

The crowdfunding policy in Indonesia is outlined in Financial Services Authority Regulation Number 37/POJK.04/2018, focusing on Crowdfunding Services through Information Technology-Based Share Offerings (Equity Crowdfunding). Financial Services Authority Regulation Number 77/POJK/01/2016 also addresses Lending and Borrowing Services Information Technology-Based Money (Pohan et al., 2020). However, the predominant use of crowdfunding in Indonesia, mainly through fin-tech peer-to-peer lending (P2P Lending), is observed within the private sector and among MSME business owners (Dwi et al., 2024).

Community crowdfunding, specifically aimed at financing the development of economic supporting infrastructure, is yet to be fully implemented (Demiray & Aslanbay, 2017; Renwick & Mossialos, 2017). Unlike some countries where crowdfunding is commonly used for smaller projects like bicycle paths, bridges, and solar cell lamps at the local level, Indonesia faces the challenge of applying crowdfunding to finance more substantial infrastructure projects such as roads, airports, and ports. In order to address this, a combination of crowdfunding with other creative financing approaches like Public-Private Partnerships is recommended. Public-Private Partnerships necessitate substantial
Government and private sector support and additional investment partners to fund more significant infrastructure ventures successfully.

2.2 CROWDFUNDING MODELS

Crowdfunding encompasses various models, each with its characteristics and purposes. The primary crowdfunding models include Reward-based Crowdfunding, Equity-based Crowdfunding, Debt-based Crowdfunding (Peer-to-Peer Lending), Donation-based Crowdfunding, Real Estate Crowdfunding, and Royalty-based Crowdfunding. These models cater to different types of projects and funding needs, allowing creators and entrepreneurs to choose the one that aligns best with their goals and the preferences of their potential backers. According to (Kirby & Worner, 2014; Ismaila, 2023), crowdfunding models can be classified into community crowdfunding or financial return crowdfunding, which differ depending on whether there is a return to backers or not (Gil-Gomez et al., 2021; Talukder & Lakner, 2023). Community crowdfunding includes social crowdfunding, loans/donations, and rewards crowdfunding, while the financial benefits of crowdfunding include peer-to-peer (P2P) lending and equity crowdfunding (see Figure 1).

Figure 1
Crowdfunding Models

Source: Source: IOSCO Research Department (Kirby & Worner, 2014; Adjakou, 2021)
3. MATERIALS AND METHODS

3.1 RESEARCH METHOD

This research employs a qualitative approach with a phenomenological research design. The phenomenological research method was considered appropriate because it addresses how and why questions, requiring control over the events under study with a research focus on contemporary phenomena (Yin, 2009; Patnaik & Pandey, 2019). Phenomenology emphasizes deeper understanding and is valuable for exploring unknown or little-known problems in an event (Harling, 2012; Mizrahi, 2019). This study aims to develop a solution by generating several vital themes through a phenomenological investigation.

The research seeks to explain phenomena by examining people's responses to events and exploring sensory perceptions in crucial aspects of their perspectives (Hollweck, 2016; Nigar, 2020). Structured interviews, including 22 informants, were conducted using in-depth interview techniques. In order to support the research implementation, a list of interviews related to the study topic was compiled (DeJonckheere & Vaughn, 2019). Informants were selected using purposive sampling techniques (Etikan, 2016; Campbell et al., 2020). The authors formulated various eligibility criteria for the interview list based on the research objectives (Creswell, 2013; Ishtiaq, 2019).

The authors reviewed several pieces of literature and online media to compile the interview list. Document review is employed when direct observation is impractical, and interviews in qualitative research are supplemented with written or visual materials to enhance research validity (Kodan & Kara, 2021). Preparing this study involves defining the problem, creating a design and instruments, collecting data, conducting data analysis, and compiling a research report (Yin, 2009; Creswell, 2009). The ultimate goal is to gain a deep understanding of the financing aspects of IKN development.

3.2 RESEARCH PARTICIPANTS

To conduct interviews, we selected a location in the IKN area of East Kalimantan, the country's capital. Since informants were scattered across Jakarta and East Kalimantan,
we chose 22 respondents based on their understanding of the study's topic. In cases where an informant could not be met in person, we utilized telephone communication with their permission. The selected informants included staff from the Ministry of Finance, Ministry of Transportation, Ministry of Public Works, Ministry of Housing, Ministry of Tourism, IKN Development Authority Agency, and five community leaders in the IKN area. This diverse selection aims to ensure that the information obtained is substantial enough to depict existing problems, impacts, solutions, and future recommendations, particularly regarding obstacles to financing IKN development.

3.3 INSTRUMENT AND PROCEDURES

We developed an interview guide in the first step. After creating this guide, it was tested through pilot interviews with several students who understood it. Furthermore, during the interview, participants were ensured to understand the definition and objectives of IKN, and IKN problems and were asked about the impact of IKN development and how to identify deficiencies in financing IKN development.

Participants were also asked what they thought about Digital Platforms and Blockchain, Public transport, and Impact on the economy in the IKN area, as well as Challenges and Recommendations. All interview results were recorded and transcribed based on participant consent. The interviews lasted 90-180 minutes and ended when the data was saturated, and there was no additional new data from the participants.

3.4 PARTICIPANT OBSERVATION

Participatory observation was conducted at IKN with 1-2 visits involving interactions with development implementer and community members who were not part of the interview study. Each observation session lasted 2-3 hours per individual. Focused observations on community members were carried out by visiting their homes, and detailed observation notes were recorded. Field observation research was conducted from October 26 to October 31, 2023.
3.5 CHARACTERISTICS OF INFORMANTS

22 informants (9 women and 13 men) participated in focused interviews. The interview locations were determined in agreement with the participants. They had an average of approximately 14.6 years of experience, ranging from 24 to 58 years.

3.6 DOCUMENT REVIEW

Researchers, with assistance from university staff, systematically verify the accuracy of data or information obtained from various perspectives to minimize bias during data collection and analysis. The method involves gathering documents considered relevant to the research from pertinent institutions and central government regulations online. This process aims to validate the data collected from the interview results. This research was conducted in the capital city of State, located in East Kalimantan Province, Indonesia. The new national capital is considered the most ideal and is situated in parts of North Penajam Paser and Kutai Kartanegara Regency, positioned at 117° 18’ 28.084” East Longitude and 1° 6’ 42.398” South Latitude in the eastern part. The city is approximately 25 kilometers (km) from Sepinggan Airport, Balik Papan city, and about 107 km from Samarinda Airport, covering a land area of around 256,142 hectares and a sea area of 68,189 hectares, the city has a population of 488,409 people.

Figure 2
The research location is the New Capital City of the Nusantara

3.7 DATA PROCESSING

Relevant data, including transcripts, discussion results, and audio recordings of interviews conducted in regional languages, were transcribed and translated into Indonesian. Subsequently, native speakers translated them into English, generating MS Word documents.

The analysis involved thematic analysis, with transcripts coded multiple times to ensure comprehensive data inclusion and retrieval. The collected data was then synthesized and interpreted based on the generated codes, leading to the identification of various themes.

4 RESULTS AND ANALYSIS

We combined the interview results from the informants in a table that reveals seven main themes in Table 2. Thematic analysis has identified 98 codes, 16 categories, and seven themes, including (1) an understanding of the National Capital Development Financing Plan, (2) IKN problems (3). Developing the Economy; (4). institutional intervention, (5). Digital Platforms and Block-chain; (6). Public transport; (7). Challenges and recommendations.

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<tr>
<th>No</th>
<th>Theme</th>
<th>Reference Notes (Interview)</th>
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<tbody>
<tr>
<td>1.</td>
<td>Understanding of the National Capital Development Financing Plan a.</td>
<td>The main reason for building IKN is economic, population, and development equality. &quot;Everything is on the island of Java, 58 percent (of economic GDP), and 56 percent of Indonesia's population is on the island of Java. The National Capital City is being built to achieve Indonesia's target of becoming a developed country by Indonesia's Vision 2045. IKN will change the development orientation to become Indonesia-centrist and accelerate Indonesia's Economic Transformation.</td>
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sourced from cooperation between the government and business entities, state-owned enterprises and the private sector.

2. IKN problems
   a. The rationale for moving the capital city is to reduce the gap and inequality between Java Island and outside Java Island. It has been stated in the Pocket Book on the Move of the National Capital issued by the Ministry of National Development Planning/National Development Planning Agency. "But this argument has no empirical basis because we do not see a model or example of a broader plan. This problem of inequality cannot be resolved simply by moving the capital city, which is expected to bring economic sectors outside Java. Apart from that, we must consider Jakarta’s sin-king's rationality. There is an opinion that to reduce the burden on Jakarta, the central Government must be moved immediately.
   b. The fundamental problem is moving the capital city, which could be called "speeding." This process still needs to be able to determine the quality of the output. The drafting and ratification of Law Number 3 of 2022 concerning the National Capital only has a period of 42 days. Capital transfers have a high risk of failure if we look at the process of preparing academic texts and other planning. This risk arises not only from the environmental side but also financially and in other ways.
   c. Informants from the University think that the final design of the central government buildings is inappropriate if they are called the State Palace. The Presidential Palace and the entire IKN should be designed to anticipate and reflect the spirit of the Indonesian nation at the age of 100. It contrasts the State Palace's final design, which reflects an outdated vision, including from an aesthetic perspective. The building is designed literally in the shape of an eagle, which seems arrogant, luxurious, expensive, and secretive. The State Palace must be dignified and reflect the ideals of the Indonesian nation as a democratic, pluralistic, and advanced nation. Apart from that, if we refer to the final design circulated, Government Center Core Area IKN still needs to be more-friendly for public and pedestrian transportation.
   d. Moreover, the landscape created does not provide space for free interaction and does not show the spirit of The Forest City, which the Government has continuously promoted. The ecological value in the Government Center Core Area IKN design is only displayed through a collection of plants that do not represent the entire surrounding ecosystem. The IKN design seems to highlight community welfare dimensions, including connectivity and transportation.
   e. If this continues without improvement, the Government's dream of creating a city where citizens can walk from one point to another in 10 minutes will be wishful thinking. So, if the results achieved in the future are different from the initial development plan, Indonesia will suffer financial losses and become a laughing stock internationally. The informant emphasized that this significant project in the public interest must be designed carefully and not be pursued until a specific time limit (Urban sociological expert from the University).
   f. Our essential question is because IKN requires 256 thousand hectares of forest, or it could be said that 70% is green area; this means the Government is deforesting 30 percent for infrastructure development and others (Infrastructure development expert from University).

3. Developing the Economy
   e. We need to share experiences to optimize the role of Islamic financial instruments. Islamic financial instruments have become an essential part of national development. The letter states that sharia-priced retail 'sukuk' (abbreviated as it is) is the Government's most important instrument. One of them is for the development of sharia finance. In a global context where world economic conditions are still unknown, the role of Islamic finance becomes increasingly needed. In order to answer global challenges, the Islamic finance industry offers great opportunities to achieve sustainable development goals. It is relevant to a program.
launched three years ago by the World Bank, namely Sustainable Development Goals or SDGs.

f. Of course, the development of various alternative instruments for financing the state budget is particularly important. Financing instruments based on Sharia principles help mobilize public funds effectively and must be implemented immediately to build IKN, which lacks funds.

g. The financial instruments to be issued for IKN must be by Sharia principles, providing legal certainty, transparency, and accountability. Efforts to develop financing instruments based on Sharia principles, among others, aim to strengthen and improve the role of the Sharia-based financial system domestically, expanding the financing base of the state budget, creating benchmarks of Sharia financial instruments in both domestic and international Sharia financial markets; expanding and diversifying the investor base; develop alternative instruments investment for both domestic and foreign investors who are looking for financial instruments sharia-based; and encourage the growth of the sharia financial market in Indonesia.

h. In terms of IKN financing, public sales are required with the aim of SBSN being sold to the public with the explicit aim of financing infrastructure projects, thereby encouraging direct community participation. We certainly need to build trust and support; namely, by seeing positive results from investment in IKN, we can increase public trust and show effective government performance. Implementation must also be careful to prevent a significant increase in average government debt.

4. Digital Platforms and Block-chain

a. To increase public trust in Indonesia, we must develop a digital platform that utilizes block-chain technology to accommodate increased trust in IKN financing.

b. If the Government implements this, Block-chain has many advantages; for example, it can guarantee transparency, reduce the risk of fraud, and eliminate intermediaries in the crowdfunding process.

c. We hope that by getting precise information on the direction of this IKN funding strategy the Block-chain method, identity security, and cost efficiency will provide significant benefits to the Government and society, especially in terms of identity security and cost efficiency.

5. Public transport

a. Considering the current rapid population growth and increasing poverty levels, public transportation in IKN requires government subsidies, considering the community's ability to pay and operational costs. It is why 'Mixed Creative Financing' is needed, namely combining crowdfunding and public-private partnership.

b. We agree with using Private Public Partnership with a payment scheme for public transportation availability. Creative financing and crowdfunding allocations can cover expenses such as viability gap funds or subsidy costs. The impact is that income from public transportation operations can provide a return on investment through crowdfunding.

6. Impact on the economy in the IKN area

a. Another economic impact we need to calculate is regarding 'Business Opportunities. The presence of public transportation will create new business opportunities around transportation nodes. The existence of public transportation will open up new business opportunities around transportation nodes.

b. Tax revenue is created in line with economic development, namely the existence of new businesses, including hotels and restaurants in IKN, which will generate additional tax revenue.

c. However, we also need to think about 'Return Concessions. It means that the operation of public transport infrastructure may be subject to concessions, which provide returns through taxes or concession revenues.

d. So, this policy plans we are asking about is perfect because it emphasizes transparency, cost efficiency, and community participation to ensure the sustainability of infrastructure development projects in IKN.
What needs to be emphasized is that the aim is not only to support short-term economic growth but also to provide long-term benefits for society and the Government.

### Challenges and Recommendations

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Recommendations</th>
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<tbody>
<tr>
<td>a. Regarding financial constraints, the IKN project faces financial</td>
<td>a. Diverse funding sources need to be explored by implementing a diversified</td>
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<td>challenges, such as the need for multiple funding sources and the</td>
<td>funding approach for IKN, for example combining government and private</td>
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<td>potential risk of deforestation. This is related to the speed and quality</td>
<td>partnerships, sharia-based financial instruments, and crowdfunding, and</td>
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<td>of capital city development, where the rapid process of moving the</td>
<td>ensuring transparency in the use of funds.</td>
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<td>capital city can pose challenges in ensuring the quality and effectiveness</td>
<td>b. Comprehensive Planning and Evaluation needs to be considered, considering</td>
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<td>of output. The short time required to draft and ratify relevant</td>
<td>the potential risks associated with the rapid development of the capital city,</td>
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<td>legislation has the potential to impact the success of capital transfers.</td>
<td>careful planning and ongoing evaluation of the process are essential. Sufficient</td>
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<td>b. Public trust and perception need to be built, especially regarding</td>
<td>time must be allocated for legislation and planning to ensure quality outcomes.</td>
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<td>the design of government buildings and overall city planning. Negative</td>
<td>c. Community Participation and Communication needs to be increased with</td>
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<td>perceptions may arise from design choices and lack of transparency.</td>
<td>effective communication strategies to build public and investor trust. The</td>
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<tr>
<td>c. Infrastructure funding for public transportation in IKN requires</td>
<td>government needs to consider using digital platforms with block-chain</td>
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<tr>
<td>subsidies due to rapid population growth and increasing poverty levels,</td>
<td>technology to exchange information related to IKN financing in a transparent</td>
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<td>thus creating financial challenges for the government.</td>
<td>and secure manner.</td>
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<tr>
<td>d. Environmental issues need to be taken into consideration. The need for</td>
<td>d. Sustainable Infrastructure Financing is a sustainable financing option for public transportation, considering a mix of creative financing, crowd-funding and public-private partnerships. Align subsidies with people's ability to pay.</td>
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<td>256 thousand hectares of forest raises concerns about deforestation, and</td>
<td>e. Environmentally Friendly Design and Development by emphasizing environmentally friendly and sustainable IKN design principles, Considering the preservation of natural resources and prioritizing ecosystem balance.</td>
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<td>there is a potential need for sustainable and environmentally friendly</td>
<td>These recommendations are broad and may require further refinement based on</td>
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<td>development practices.</td>
<td>the specific details and challenges faced by IKN projects.</td>
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Source: From In-depth interview with participants, 2023

### 4.1 BUDGET DEFICIT AND GOVERNMENT DEBT

President Joko Widodo's ambitious infrastructure development policies have led to a relatively large budget deficit, exacerbated by the impact of the COVID-19 pandemic, causing the deficit to widen by US$ 40.5 billion. The Government relies on debt
utilization as a short-term measure, experiencing a drastic increase of 201% over the last two decades, reaching US$ 496.25 trillion.

For this reason, wise consideration is required in financing development projects considering these conditions. Prudential considerations are critical in financing development projects. It is essential to prevent excessive burdens on the State Revenue and Expenditure Budget and ensure the continuity of fiscal affairs.

Meanwhile, the Financial Services Authority has regulated crowdfunding policies, but its implementation is mainly utilized by the private sector, especially in financing businesses or projects through fin-tech P2P lending. Until now, there has been no specific public crowdfunding model for maintaining economic infrastructure with creative financing, such as Government Collaboration with Business Entities, which involves support from the Government, the private sector, and investment partners.

Indonesia has extensive crowdfunding potential, supported by significant middle-class growth (Permatasari et al., 2022). With the middle-class population expected to reach 52 million by 2020, crowdfunding can be used effectively as an alternative financing method. Its moderate middle-class characteristics and stable risk profile provide promising investment opportunities.

This crowdfunding potential can be used to develop the infrastructure of the East Kalimantan National Capital Region, including transportation infrastructure, supporting facilities, and economic supporting infrastructure, which is scheduled to be implemented in stages 2 to 5 (2025-2045).

According to Hobbs et al., (2016) and Testa et al., (2018), they are managing crowdfunding potential needs to be done carefully, especially in the financial sector. It is essential to support sustainable financing due to the impact of crowdfunding on the economy in East Kalimantan. It has advantages in the leading mining and agriculture sectors and has dramatically influenced economic changes. The Government can implement plans to develop a crowdfunding model to develop IKN as an environmentally friendly smart city, which requires strict standards to bring about structural changes in the regional economy. By delving into these impacts and considerations, the analysis offers a holistic perspective on infrastructure development policy and the role of crowdfunding within the context of fiscal challenges and economic development in Indonesia.
4.2 POLICY PLAN FOR ECONOMIC IMPROVEMENT THROUGH INFRASTRUCTURE

4.2.1 Short-term strategy

This short-term strategic plan requires raising public funds through State Sharia Securities. State Sharia Securities (SSS) are issued based on Sharia principles as proof of investment in SSS assets, both in rupiah and foreign currency. The benefits of investing in SSS are that the public can obtain security in SSS because it has high credibility and is guaranteed by the Government. It reduces investment risks and provides confidence to investors and the public.

In the future, the Government must be careful to prevent a significant increase in average government debt. By developing a particular SSS model for IKN financing, the Government can form an SSS tailored to infrastructure development in this area. The four methods (Kirby & Worner, 2014; Soares da Silva et al., 2019) can be applied simultaneously. In the context of SSS objectives, for example, when selling shares, a clear objective must be explained to the community to finance infrastructure projects and collaborative efforts with other institutions to encourage direct community participation.

Therefore, the Government must build trust and full support from the community. People who see positive results from investing in IKN will be able to increase public trust and demonstrate effective government performance.

4.2.2 Medium Term

In the Medium-Term Strategy, developing Digital Platforms and Block-chain is deemed essential (Taherdoost & Madanchian, 2023). The Government can create digital platforms using block-chain technology to foster increased public trust (Rijal & Saranani, 2023). Block-chain offers advantages such as ensuring transparency, reducing the risk of counterfeiting, and eliminating intermediaries in the crowdfunding process (Jahankhani et al., 2021). Notably, it provides significant benefits regarding identity security and cost efficiency.

In this medium-term strategy, subsidized public transportation becomes necessary, considering the area's current population growth while considering the community's ability to pay and operational costs.
Introducing ideas like Blended Creative Financing is crucial (Jung, 2020). The mentioned mixed creative financing model involves combining crowdfunding with Public Private Partnerships, which can be implemented to fund infrastructure and public transportation (Farajian & Ross, 2016; Aini et al., 2019). Another type of public-private partnership is Government and Business Entity Cooperation, which involves cooperation between the Government and business entities in providing infrastructure for public interest based on predetermined specifications. The Government can leverage GBEC with an available payment scheme for public transport. Revenue generated from public transportation operations can provide a return on investment through crowdfunding. Therefore, mixed creative financing can cover several expenses, such as viability gap funds or subsidy costs, through crowdfunding.

Introducing public transportation will generate new business opportunities around transportation nodes, leading to continued development and an increase in the Gross Regional Domestic Product of the area around IKN. Similarly, tax revenues will increase as new businesses (Yoshino & Abidhadjaev, 2017), including hotels and restaurants, generate additional tax revenues. The Government also needs to consider return concessions. The operation of public transport infrastructure should be subject to concessions, providing returns through taxes or concession revenues (Ortiz et al., 2008; Roumboutsos & Pantelias, 2014).

4.2.3 Long Term

At this stage, the utilization of crowdfunding has reached a higher level of maturity. The success of IKN in employing crowdfunding as an alternative source of infrastructure financing can serve as a model for other regions, enabling them to provide economic support for the infrastructure for their residents’ welfare and improved living standards. By 2045, Indonesia, projected to attain developed country status, is expected to witness an increase in people's income. Elevated income levels will consequently enhance people's ability to pay, reducing the need for subsidies. Returns for public investors through crowdfunding can be allocated from profits generated by operating public transportation or other economic supporting infrastructure. This way, income from taxes and concessions can be directed toward fulfilling other essential needs.
During this stage, the transition in the economic base also commences in the East Kalimantan Province region, particularly around IKN City, encompassing North Penajam Paser and Kutai Kertanegara Regency. The transformation involves a shift in leading sectors from mining and quarrying to food and drink accommodation, transportation and warehousing, and other evolving sectors. According to the researcher's analysis using the Klassen typology, East Kalimantan Province exhibits various sectors with potential for development, excluding the information and communication sector, real estate sector, corporate services sector, and health sector, which are relatively underdeveloped. The success of constructing economic supporting infrastructure will play a pivotal role in the transformative shift of the economic base in East Kalimantan Province.

This policy plan emphasizes transparency, cost efficiency, and community participation to ensure the sustainability of infrastructure development projects in IKN. The goal is to support short-term economic growth and provide long-term benefits for society and the Government.

5 CONCLUSION

Indonesia must prioritize infrastructure development as a cornerstone to position itself as a developed country by 2045. While infrastructure has a dual impact on economic growth, the challenge lies in its strain on government budgets, necessitating exploring alternative financing sources. Crowdfunding emerges as a promising solution, leveraging high public interest and successful fundraising endeavors in Indonesia. Directing crowdfunding toward high-value infrastructure projects, such as toll roads, airports, and ports, offers a viable avenue to reduce reliance on the state budget. The challenge for stakeholders is transforming crowdfunding into a potent alternative that fosters economic inclusion. Inclusive economic growth cultivates a favorable investment climate and attracts capital for sustained infrastructure development.

China serves as an inspiring model, having achieved economic prowess through openness and optimal utilization of domestic resources. Attaining independence in infrastructure financing diminishes reliance on foreign nations. Transparent management of public funds becomes a magnet for local investors, decreasing dependence on foreign aid, which can counter-productively impede economic growth. The evolution of the Open Government concept, inviting community participation in development, fosters
independence and diminishes reliance on foreign aid. Increased public participation underscores the principles of an open and transparent government, consequently fostering positive impacts on economic growth and diminishing foreign dependencies.

5.1 RECOMMENDATIONS

- The Government should actively promote infrastructure development through crowdfunding, focusing on projects with high economic value, such as toll roads, airports, and ports. Prioritizing economically viable projects can minimize risks and increase public interest in investment. Community empowerment and financial education campaigns centered around crowdfunding should be implemented to achieve this. These initiatives aim to enhance public understanding of crowdfunding investments, encouraging greater community participation in supporting infrastructure development.

- The Government can use State Sharia Securities to finance infrastructure projects in IKN. It involves engaging the community by selling Sharia debt securities, fostering confidence in public investment, and ensuring transparency in fund management.

- Consideration should be given to integrating block-chain technology into crowdfunding platforms. This move aims to enhance crowdfunding platforms by leveraging block-chain technology, improving security and transparency, reducing the risk of counterfeiting, and minimizing operational costs. This integration is crucial for building greater public trust in crowdfunding investments.

- In the medium-term strategy, the Government is encouraged to explore the concept of mixed creative financing for public transportation. The Government can alleviate fiscal burdens by implementing blended creative financing, combining crowdfunding with public-private partnership. This approach includes adopting a payment availability scheme with annual government payments to business entities. Additionally, the Government should formulate stringent regulations concerning environmental standards in line with the development of IKN, fostering environmentally friendly cities and creating business opportunities in the environmental sector, such as waste processing and renewable energy.
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REFERENCES


Ortiz, I., Buxbaum, J., & Little, R. (2008). Protecting the Public Interest: Role of Long-Term Concession Agreements for Providing Transportation Infrastructure.
Transportation Research Record, 2079, 88–95. https://doi.org/10.3141/2079-12


