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ORIGINAL ARTICLE

How are companies involved in the construction of the trans Sumatra toll road, in Indonesia? Role analysis and development policy

***Vera Finidia Indah*[1,2,*], *Budiman Rusli*[1], *Rita Myrna*[1], *Zaidan Nawawi*[2]**

[1] *Department of Public Administration, Faculty of Social and Political Science, Universitas Padjadjaran, Bandung, 40132, Indonesia*

[2] *Department of State Management, Sekolah Tinggi Ilmu Ekonomi Aprin Palembang Jl. Bala Dewa, Palembang, 30163, Sumatera Selatan*

ABSTRACT

Toll road infrastructure development is one of the development priorities of the government of Indonesia a developed country. To develop toll road infrastructure to run smoothly, it is necessary to involve the government and the private sector. This research aims to analyze the role of the government and land acquisition constraints in the construction of the trans Sumatra toll road. This research uses a qualitative-explorative method to explore the research topic. Determination of the research topic is done by using biblioshiny application analysis. Then the data is collected from observation, documents from the website, and applicable literature. The data collected was then analyzed using Nvivo 12 Pro Software and Vensim PLE X64 Software to provide accurate and systematic visualization and description. The results of this study found that the trans Sumatra toll road construction project is a national development project. Then the cooperation relationship carried out by the government in the construction of the trans Sumatra toll road is regulated through policies that run in 2014–Present. The companies involved in accelerating the construction of the trans-Sumatra toll road are PT Hutama Karya and PT Waskita Sriwijaya Tol. Another finding in this study is that there are still toll road sections that have not operated and have been stopped due to customary land acquisition issues.

KEYWORDS

limited liability company; public policy; government; development; toll roads

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*CORRESPONDING AUTHOR
Vera Finidia Indah,
Department of Public Administration,
Faculty of Social and Political Science,
Universitas Padjadjaran, Bandung,
40132, Indonesia
vera19001@mail.unpad.ac.id

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1. Introduction

The role of the private sector in the development of toll road infrastructure is very important

for development in developing countries (Iliashenko et al., 2021; Ogwang and Vanclay, 2021). This concept is called public-private partnership, and the involvement of public and private parties in road infrastructure development can accelerate development efforts (Mamirkulova et al., 2020; Winata and Gultom, 2023; Zhan and Santos-Paulino, 2021). Therefore the government and corporations need to collaborate mutually beneficially to achieve efforts in achieving the 9th SDGs goal on industry, innovation, and infrastructure (Eweje et al., 2020; Lekan et al., 2022; Stott and Murphy, 2020). Toll road infrastructure can improve and facilitate business activities such as tourism, and improve people's lives.

The development of road infrastructure can create employment opportunities reduce unemployment, increase business, and benefit the lives of neighboring communities (Aman et al., 2022). Thus, the involvement of the private sector is very important and there needs to be clear regulations to regulate this. One of the reasons why the private sector has a much-needed role in the development agenda is because the private sector has more budget to spend (Robert et al., 2014). However, when involving the private sector in road construction such as toll roads, there needs to be a mutually beneficial agreement or contract. This is to strengthen the cooperation between the government and the private sector in road infrastructure development efforts so that it can benefit and provide social impacts for the community from the mega road development project (Rohman et al., 2017).

Toll roads commonly referred to as freeways are one way for the government to realize equitable development (Aljboor et al., 2023; Westskog et al., 2020). The definition of toll roads based on Indonesian government regulation No. 15 of 2005 concerning toll roads is a public road that is part of the road network system and is a national road whose use is required to pay tolls. Based on law No. 38 of 2004 concerning roads, it is stated that the authority to implement toll roads lies with the government which includes regulation, guidance, exploitation, and supervision. Toll road exploitation is carried out to accelerate the realization of a freeway network as part of the national road network and is carried out by state-owned enterprises or regionally-owned enterprises or privately-owned enterprises. The government carries out land acquisition for the construction of toll roads for the public interest by using funds originating from the government or in collaboration with business entities.

In Indonesia, cooperation between the government and private parties such as limited companies (Perusahaan Terbatas, PT) in the development of road infrastructure have long been carried out. So many development projects in Indonesia that have been built and even operated are the result of cooperation between the government and the private sector. The role of the Indonesian government in road infrastructure development efforts is to design regulations, provide locations, and carry out the land acquisition. The company's role is to provide funds for the construction costs of toll road construction and payment of land acquisition which is the location of development. The number of toll roads in Indonesia is 70 toll roads managed by 49 toll road business entities (Badan Usaha Jalan Tol, BUJT) (kompas.com, 2023a).

The cooperation between the Indonesian government and the company is known as Public Private Partnership (PPP). Some companies are PT Jasa Marga, PT Hutama Karya, PT Citra Marga Nusaphala Persada, PT Jakarta Lingkar Barat Satu, PT Marga Lingkar Jakarta, PT Bosowa Marga Nusantara and so on. The construction of the first toll road in Indonesia was first carried out in 1978

under the leadership of President Soeharto in collaboration with PT Jasa Marga. The length of the toll road is 59 kilometers with the Jakarta, Bogor, and Ciawi roads (Suseno et al., 2015).

Previous studies have discussed the involvement of companies in the construction of toll roads in the world. Researchers conducted an analysis related to the novelty of research using the biblioshiny application to analyze what topics were discussed by researchers, the origin of researchers, country contributions, and keywords in previous studies (Abafe et al., 2022)we explored Biblioshiny to review the scholarly research on the sustainable use of water in agriculture. Using data analysis and visualization technique of 4106 documents authored by 12,686 scholars in 724 journals published between 1990 and 2022, we find that research on this topic gained momentum in 2007 and has followed a steady increase with an annual growth rate of ~16.12%. The results of the co-occurrence network mappings highlight five trendy topics in research on sustainable water use in agriculture, which were categorized based on five (5. The data collected to find suitable research topics and see the development of research is by collecting data from the Scopus database. The data search was conducted by entering the keywords "Toll Roads" and "PPP". The data obtained with the results of the keywords that have been entered in the search found 122 documents from 2001–2023. The researcher then analyzed the 122 articles to find research facts and the source of the research using biblioshiny (**Figure 1**).

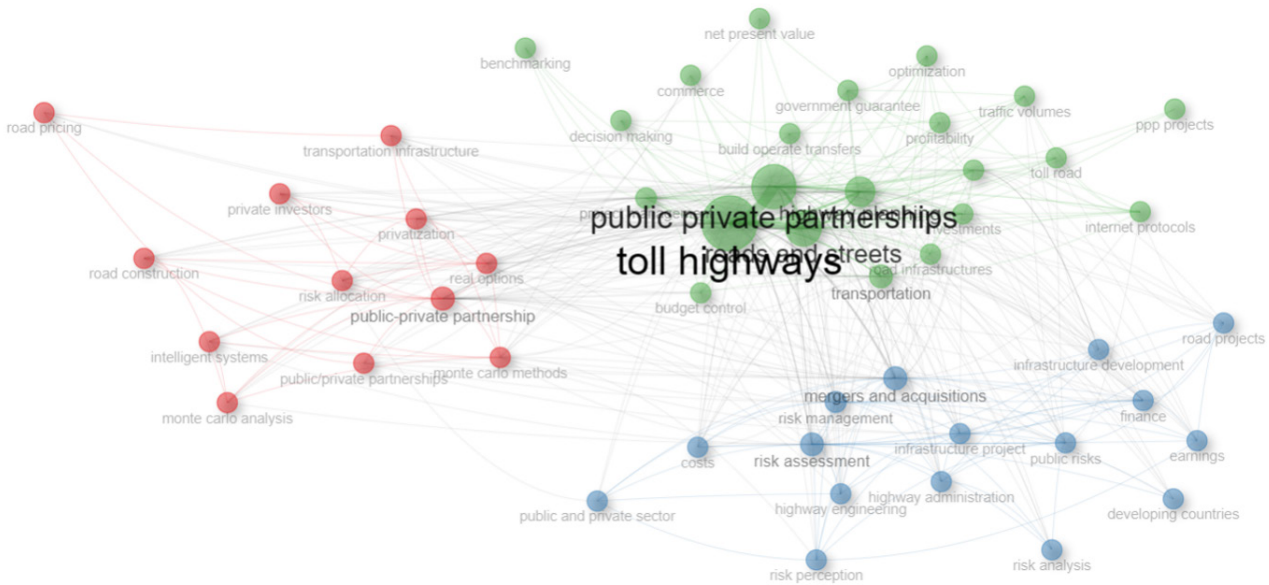

Figure 1. Co-occurrence Network.
Source: processed by bibliosinhy from Scopus database, 2023.

Based on **Figure 1**, the researcher mapped the author's contribution related to the keywords entered into the Scopus database. Research related to the construction of toll roads is still often researched through a public-private partnership approach. Including research that discusses the impact evaluation in terms of time and cost of toll road construction (Oliveros-Romero and Aibinu, 2023; Winata and Gultom, 2023), political factors (Tang et al., 2023), socio-economic contract negotiation (Alghamdi et al., 2022)their determination presents complexities to decision-makers due to these components' interdependencies. Assessing the dynamic and interdependent relationships between the socio-economic concession components can enhance the development of

PPP concessions. System dynamics (SD, assessing government performance (Rohman, 2022), and benefits of toll roads for society (Rohman & Wiguna, 2021).

Research on toll road construction using the public-private partnership approach is also still being researched by researchers from Indonesia who discuss governance in the construction of toll roads in public-private partnerships related to contracts, anticipation of time delays (Winata and Gultom, 2023), then assess government performance in toll road development cooperation projects and investor protection in project performance with the PPP concept in Indonesia (Rohman, 2022), Toll road design performance can provide much better social benefits to the community (Rohman and Wiguna, 2021).

The various existing literature related to toll road construction involving the government and the private sector is still interesting and often researched. However, as for the differences in research conducted previously, it does not discuss specifically how the private sector plays a role in toll road development cooperation, especially in Indonesia. Then there is no research in Indonesia related to toll road construction that discusses the role of the private sector and the government in the construction of the trans-Sumatra toll road. So that is the difference between previous research and research that will be conducted by researchers.

Therefore, the purpose of this study is to analyze the contribution and role of the government and the private sector in the construction of the trans-Sumatra toll road. In addition, this study will also examine obstacles, especially land acquisition issues in the construction of the trans-Sumatra toll road.

The research questions that will be carried out are:

RQ 1. What is the role of the government and the private sector in the construction of toll roads?

RQ 2. What are the constraints of toll road construction?

2. Methodology

This research will analyze the involvement of the government and companies in the development of trans Sumatra toll road infrastructure in the Greater Palembang Agglomeration area. The location of this research is in the administrative area of the government of South Sumatra Province, especially the agglomeration area which is around or adjacent to Palembang city as its center or core. Although almost all toll road construction in Indonesia involves the corporate sector in its development. However, the reason why this research was conducted in South Sumatra is because one of the toll roads built since 2019 is the longest toll road in Indonesia. The toll road is the fastest in construction during the history of toll road construction in Indonesia because it only takes 2.5 years (Zufrizal, 2021). The construction map of the trans-Sumatra toll road section can be seen in **Figure 2**.

Figure 2. Trans Sumatra toll road map.
Source: www.hutamakarya.com, 2023.

The method used in this research is a qualitative method to analyze, identify, and explore related facts in the field (Anthony Jnr et al., 2021; Creswell, 2016). Qualitative research is widely used in public administration research and even in development research. Data were obtained through observation, and literature study by studying and reading books, journals, official documents, and other relevant sources. The data collected is then analyzed and interpreted through various stages, namely reduction, presentation, and verification to obtain conclusions in the form of new findings that are useful for further research (Miles Matthew et al., 2014). Then data related to the research topic is carried out using the biblioshiny application which can map in more detail related to research topics that have been carried out by previous researchers (As-Salafiyah et al., 2022)authors and journals. The data analyzed were 229 publications of research publications in Dimension (https://dimension.ai. Furthermore, the data collected will be processed at the coding stage and analyzing the data. Then after that, the data will be visualized by researchers using Nvivo 12 Pro and Vensim PLS X64 to see the results (Mortelmans, 2019; Pang et al., 2022; Woolf and Silver, 2018). The data obtained were analyzed from Nvivo using the concept map and project map features to find conclusions from the data obtained. The process of data collection and data analysis can be seen in **Figure 3**.

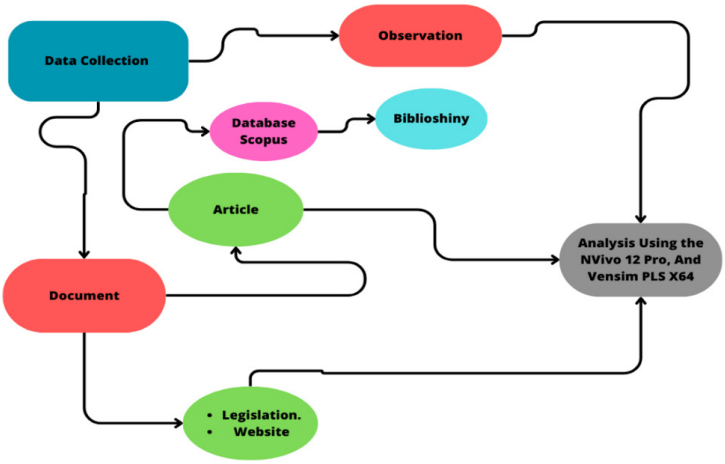

Figure 3. Data collection and data analysis process.
Source: processed by the researcher, 2023.

From **Figure 3** above, it is explained that in this research, data is collected from observations and literature study documents by studying and reading books, journals, official documents, and other relevant sources. So that the data collected is then grouped according to research needs. After the data was grouped, the researchers carried out the analysis process by entering the data and documents into the Nvivo 12 Pro and Vensim software. Nvivo 12 Pro is software used to assist researchers in analyzing qualitative data, such as interview transcripts, observations such as images, diagrams, audio, web pages, and other document sources (Dalkin et al., 2021). Then after the data is entered and mapped into Nvivo 12 Pro, the researchers carry out the analysis stage using 2 features, namely Concept Map, and Project Map. First, the Concept Map feature is used to visualize freely from the data obtained by the researcher. So that researchers then visualize the data obtained from observations and documents. Second, the project map feature is used to analyze related cases and notes to be connected to through the coding process. Thus, in this study, the results of observations and documents were obtained using the project map feature to map the role of the government and the private sector in toll road construction.

3. Result

3.1. Involvement of a limited liability company (PT) for the construction of the Sumatra toll road

The involvement of companies in infrastructure development projects such as roads, buildings, bridges, and toll roads cannot be separated from the development plan. This is because the company has a budget that is devoted to being invested for profit. On the other hand, the government also cannot carry out long-term infrastructure development because the budget for each year has been regulated and clear for its use. Therefore, one of the infrastructure developments that requires the involvement of a limited liability company (PT) is the construction of the trans Sumatra toll road. The construction of the Sumatra toll road is one of the national projects that connects 2 major islands in Indonesia, namely Sumatra Island, and Java Island.

The Sumatra toll road construction project is targeted to be able to cover the distance from Aceh to Lampung (Java Island) from 48 hours to 38 hours. The toll road construction project can be connected to productive areas of industrial areas, tourism, airports, and ports, which will reduce logistics costs and increase the competitiveness of domestic products.

The companies involved in the construction of the trans Sumatra toll road are PT Waskita Sriwijaya Tol and PT Hutama Karya. The total road sections that are temporarily operating and in the reconstruction stage are 10 toll roads. The 9 toll road sections are managed by PT Hutama Karya and 1 toll road section is managed by PT Waskita Sriwijaya Tol. This is based on presidential regulation of the Republic of Indonesia Number 117 of 2015 concerning the acceleration of toll road development in Sumatra. With this regulation, the Indonesian government legally assigns PT Hutama Karya in full for the construction of the Sumatra toll road. So that the company that is given the task by the government will contribute to the construction of toll roads and provide a budget until the toll road is operational.

The toll road sections constructed by 2 limited liability companies (PT) and progress related to the development of the Trans Sumatra toll road can be seen in **Table 1.**

Table 1. Division and financing of trans Sumatra toll road construction.

Road section	Toll road business entity	Section	Length (Km)	Operation target	Cost		
					Investment	Construction	Land
Kayu Agung-Palembang-Betung	PT Waskita Sriwijaya Tol	Section 1: Kayu Agung-Jakabaring	33,50	Operation 2020	IDR 14.44 Trillion	IDR 9.84 Trillion	IDR 0.45 Trillion
		Section 2A: Jakabaring-Kramasan	9,00	Operation 2021			
		Seksi 2B: Kramasan-Musilandas	24,90	August 2023 (Not yet operational)			
		Section 3: Musilandas-Betung	44,29	August 2023 (Not yet operational)			
		Total	11,69				
Medan-Binjai	PT Hutama Karya	Section 1A: Ti. Mulia-Marelan	4,22	Operation 2021	IDR 2.50 Trillion	IDR 1.90 Trillion	IDR 0.31 Trillion
		Section 1B: Helvetia-Marelan	3,00	Operation 2019			
		Section II: Helvetia- Sei Semayang	6,17	Operation 2017			
		Section III: Sei Semayang-Binja	4,28	Operation 2017			
		Total	17,67				
Kuala Tanjung-Tebing Tinggi-Parapat	PT Hutama Karya	Junction Tebing Tinggi	7,07	Q2 2023	IDR 13.45 Trillion	IDR 9.55 Trillion	-
		Section 1 Tebing Tinggi-Indrapura	20,40	Q2 2023			
		Section 2 Indrapura-Kuala Tanjung	18,05	Q2 2023			
		Section 3 Tebing Tinggi-Serbelawan	30,00	Q2 2023			
		Section 4 Serbelawan-Pematang Siantar	28,00	Q4 2023			
		Government Support					
		Section 5: Pematang Siantar-Seribudolok	22,30	Not yet operational (Target 2024)			
		Section 6: Seribudolok-Parapat	16,70	Not yet operational (Target 2024)			
		Total	39,00				
Sigli-Banda Aceh	PT Hutama Karya	Section 1: Padang Tiji-Seulimeum	24,68	Not yet operational (Target 2024)	IDR 12.35 Trillion	IDR 8.99 Trillion	-
		Section 2: Seulimeum-Jantho	6,26	Operation 2022			
		Section 3: Jantho-Indrapuri	16,37	Operation 2021			
		Section 4: Indrapura-Blang Bintang	14,60	Operation 2020			
		Section 5: Blang Bintang-Kuto Baro	7,60	Operational April 2023			
		Section 6: Kuto Baro - Baitussalam	5,11	Operational April 2023			
		Total	74,00				
Indrapura-Kisaran	PT Hutama Karya	Indrapura Kisaran 1, and 2	47,75	Q2 2023	IDR 6.05 Trillion	-	-
		Total	47,75				

Table 1. (Continued).

Road section	Toll road business entity	Section	Length (Km)	Operation target	Cost		
					Investment	Construction	Land
Pekanbaru-Padang (Segmen Pekanbaru-Sicincin)	PT Hutama Karya	Padang-Sincincin (Kapalo Hilalang) Sta 0 = 200 – 4 = 200	4,00	Target Operation 2024	IDR 80.41 Trillion	IDR 45.99 Trillion	-
		Padang-Sincincin (Kapalo Hilalang) Sta 4 = 200- 36 + 600	32,00	Target Operation 2024			
		Total	36,00				
Pekanbaru-Padang (Segmen Pekanbaru-Pangkalan)	PT Hutama Karya	Pekanbaru-Bangkinang	40,00	Operation 2020			
		Bangkinang-Pangkalan Phase I (Tj. All)	24,70	Operation 2023			
		Total	64,70				
Simpang Indralaya-Muara Enim	PT Hutama Karya	Simpang Indralaya- Prabumulih	64,50	Operational June 2023	IDR 24.11 Trillion	IDR 15.68 Trillion	-
		Prabumulih-Muara Enim	54,60	Target Operasi 2024			
		Total	119,00				
Lubuk Linggau-Curup-Bengkulu	PT Hutama Karya	Section 1: Lubuk Linggau-Kepahiang	54,00	Target Operation 2023	IDR 37.61 Trillion	IDR 24.82 Trillion	-
		Seksi 2: Kepahiang-Taba Penanjung	23,00	Target Operation 2023			
		Section 3: Taba Penanjung-Bengkulu	17,60	Target Operation 2023			
		Total	95,8				
Binjai-Langsa	PT Hutama Karya	Section 1: Binjai-Stabat		Operation 2022	IDR 23.35 Trillion	IDR 16.7 Trillion	-
		Section 1,2,3: binjai-Pangkalan Brandan	57,50	Operation2023			
		Section 4: Pangkalan Brandan-Kuala Simpang	44,24	Operational After 2024			
		Section 5: Kuala Simpang-Langsa	29,18	Operational After 2024			
		Total	130,92				

Source: toll road regulatory agency, 2023.

Based on the data obtained in **Table 1**, it can be seen that of the 10 road sections of the trans-Sumatra toll road construction 90 percent was taken over by PT Hutama Karya with a total investment fund of IDR 199.83 trillion. The total amount of construction costs from PT Hutama Karya incurred is IDR 123.63 trillion and land costs are IDR 0.31 trillion. Meanwhile, as for the funds spent by PT Waskita Sriwijaya Tol, which only got a quota of 1 road section on the Sumatra toll road. The funds spent by PT Waskita Sriwijaya Tol for investment are IDR 14.44 trillion, then construction costs of IDR 9.84 trillion, and land costs of IDR 0.45 trillion. Each company is given a target in completing the construction of the trans Sumatra toll road. However, from 2017 to 2023 there have been many toll road sections that have operated according to the targets agreed upon by the government and the private sector. However, based on **Table 1** above, it can be seen that there are still several road sections that are still under construction so that the operation target can be implemented in 2024. When viewed in Table 1, investment is made by the private sector by allocating funds for the construction of toll roads with the aim that it can be completed quickly. In addition, investments made by limited companies have a multiplication effect on the sustainable development of JTTS and reduce company loans in building the trans Sumatra toll road. The progress of the trans-Sumatra toll road section can be seen in **Figure 4**.

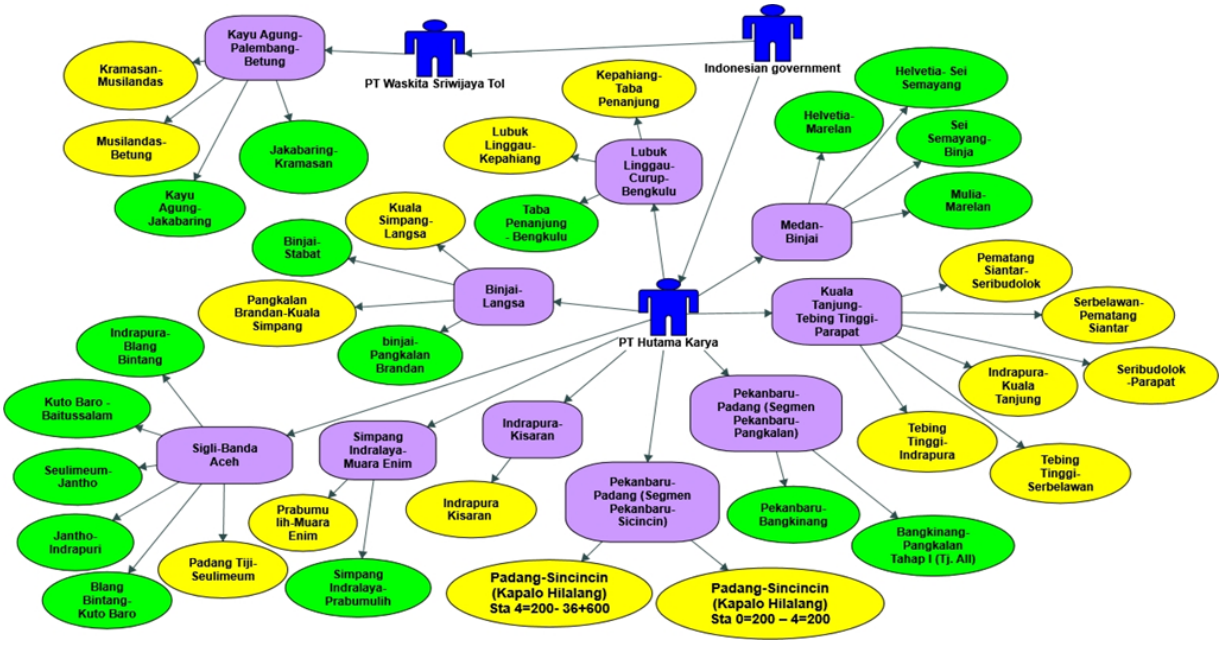

Figure 4. Concept map "Construction Progress of Trans Sumatra Toll Road Development".
Source: processed by the researcher with Nvivo 12 Pro, 2023.

From **Figure 4,** it can be seen that the visualization of the concept map using Nvivo Pro related to the progress of the construction of the Sumatra toll road is carried out by 2 companies, namely PT Hutama Karya (Blue) and PT Waskita Sriwijaya Tol (Blue). PT Hutama Karya manages 9 toll road sections consisting of Indrapura Kisaran, Indralaya-Muara Enim Simpang, Sigil-Banda Aceh, Bijai-Langsa, Lubuk Linggau-Curup-Bengkulu, Medan-Binjai, Kuala Tanjung-Terbing Tinggi-Parapat, Pekanbaru, Padang (Pekanbaru-Pangkalan Segment), and Pekanbaru-Padang (Pekanbaru-Sicincin Segment). However, the 9 toll road sections are not fully operational, it can be seen from each section (Green Color = Already Operating) and (Yellow Color = Not yet Operating). The reason why there are still toll road sections that have not yet operated is that they are still under construction as happened in the Kramasan-musilandas and musilandas-betung toll road sections (kompas.com, 2023b). almost the same thing also happened in the Padang-Fiji seulimeun toll road section where the toll road was not operating because it was still under construction. (Chan, 2023). Furthermore, the Prabumulih-Muara Eanim toll road section experienced delays in operation due to land acquisition constraints, so the toll road work has only completed 8.69 percent construction (Suwarno, 2021). The Indrapura-Kisaran toll road section is not yet operational but is targeted to be completed in 2023 because the progress has reached 87.49 percent (Nurdifa, 2023). In addition, constraints regarding land acquisition are also the reason the Padang-Pekanbaru toll road project has not been completed or even stopped. This happened because of the problem of land acquisition of customary land, making the construction process delayed (Yanwardhana, 2022). Furthermore, the Kuala Tanjung-tebing tinggi parapat toll road section is not yet operational but is targeted to be operational in 2023. In the process of building the trans-Sumatra toll road, it has not been fully completed due to obstacles such as delays due to customary land acquisition issues. There are several toll road sections whose construction process has stopped because the land issue cannot be resolved. The cooperation mechanism carried out between the government and the limited liability company (PT) can be seen in **Figure 5**.

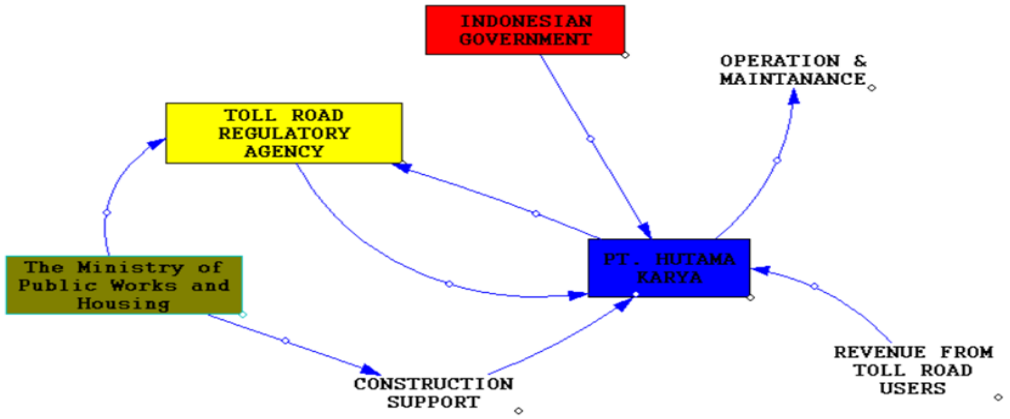

Figure 5. Schematic analysis of construction support for Sumatera toll road development.
Source: processed by researchers using Vensim PLE X64, 2023.

Based on **Figure 5**, researchers conducted an analysis using the Vensim application to see the cooperation relationship between the government and the Company in the construction of the trans Sumatra toll road. From the visualization results, it can be explained that PT Hutama Karya signed a toll road concession agreement (Perjanjian Pengusahaan Jalan Tol, PPJT) with the toll road regulatory agency (Badan Pengatur Jalan Tol, BPJT) on behalf of the ministry of public works and public housing. The government gives a license period to PT Hutama Karya with a period of 70 years. Then PT Hutama Karya compiled detailed engineering design, operation and maintenance. Furthermore, the government provides construction support for the Betung-Jambi-Rengat road section and part of Rengat-Pekanbaru along 305 km. So toll revenues will be managed by PT Hutama Karya for the next phase of toll road construction.

Therefore, from the results of the analysis carried out, it can be said that the company's involvement in the construction of the trans Sumatra toll road was carried out by PT Hutama Karya and PT Waskita Sriwijaya Tol. However, the company that plays the most role in the construction of the Sumatra toll road is PT Hutama Karya. The cooperation carried out uses an agreement scheme with the government with a duration of 70 years. So that PT Hutama Karya will manage the toll road from the revenue generated. Then from the income, it will also be the capital to continue the construction of the unfinished toll road (See Figure 4). So it can be said that the role of the government and the company in the construction of this toll road is classified as good and mutually beneficial to each other.

3.2. Trans Sumatra toll road development policy

The concept of collaboration in development efforts is interrelated and interdependent in achieving their respective goals. So the analysis carried out regarding the involvement of several actors in development such as infrastructure must be planned in detail. A limited liability company (PT) is one of the elements that play an important role in efforts to realize the construction of toll road infrastructure development and management in Indonesia. So that every stakeholder cooperates in implementing toll road infrastructure development policies to improve the economy and industry. The development related to infrastructure development from time to time in Indonesia can be seen in **Figure 6**.

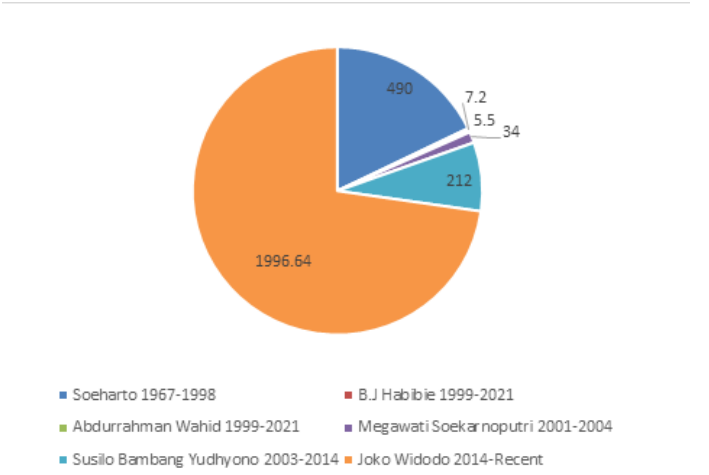

Figure 6. The development of toll road construction for each presidential era in Indonesia.
Source: processed by researchers from various sources, 2023.

It can be seen in **Figure 6** that every era of presidential leadership in Indonesia has a toll road infrastructure development project. From the data, it can be seen that the leadership of president Jokowi Dodo is the president who has carried out the most toll road construction projects during his leadership since 2014. One of the ongoing toll road development projects is the construction of the trans Sumatra toll road. This is by presidential regulation No. 117/2015 on the acceleration of toll road development in Sumatra, which previously used presidential regulation No. 100/2014. The Government gave an assignment to PT Hutama Karya to carry out the construction of toll roads in Sumatra. The policy has the aim of completing the construction of toll roads by presidential regulation number 18 of 2020 concerning RPJMN 2020-2024.

The chronology of the discussion related to the draft presidential regulation of the Republic of Indonesia on the second amendment to presidential regulation number 100 of 2014 on the acceleration of toll road development in Sumatra can be seen in **Figure 7**.

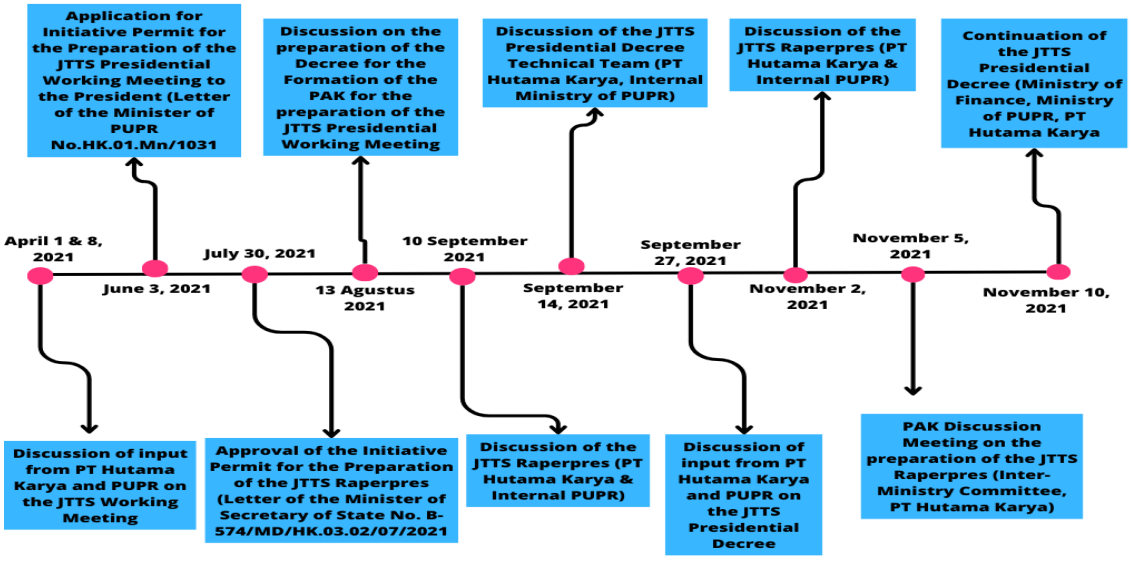

Figure 7. Chronology of trans Sumatra toll road development policy.
Source: processed from Nvivo 12 Pro, 2023.

Discussions related to the draft presidential regulation regarding the acceleration of the construction of the trans-Sumatra toll road began with input from PT Hutama Karya with the ministry of public works and people's houses carried out on 1–8 April 2021. Then on 3 June 2021, a letter from the minister of public works and people's houses Number HK.01.01-Mn/1031 was issued with a request for permission to initiate the drafting of a presidential regulation related to the trans-Sumatra toll road to president Jokowi Dodo. After that, the request for permission was then approved by the minister of state secretariat letter number B-574/MD/HK.03.020/07/2021. So with this letter, a decree and formation of PAK within the internal environment of the ministry of public works and people's houses were prepared.

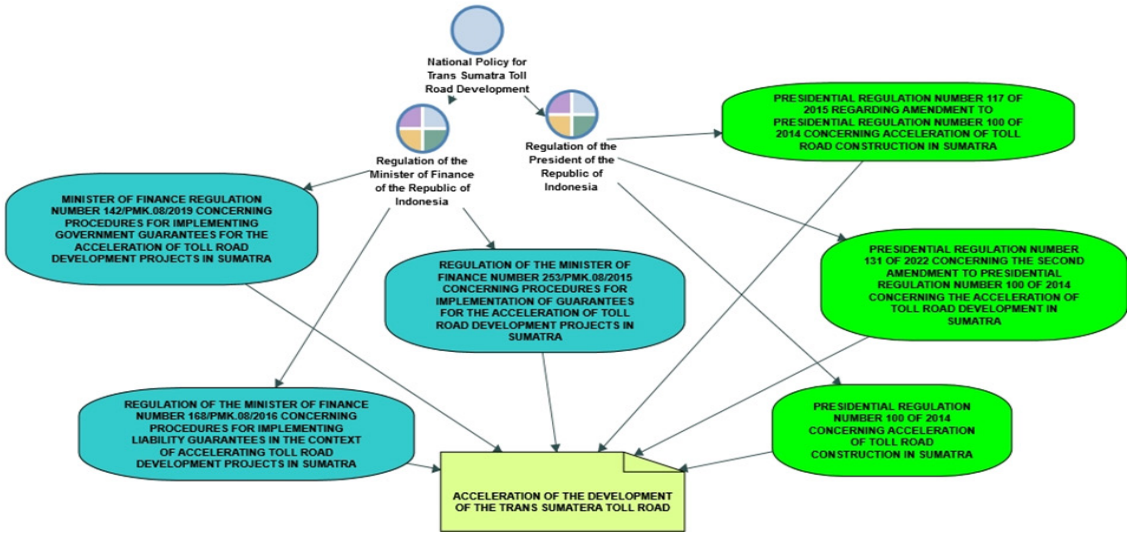

Figure 8. National policy analysis of trans Sumatra toll road development.
Source: processed from Nvivo 12 Pro, 2023.

From **Figure 8** above, it can be seen how the policy contributes to the development of the trans Sumatra toll road. The trans Sumatra toll road development policy was first present in the era of president Jokowi Dodo in 2014 with presidential regulation number 100 of 2014 concerning the acceleration of toll road development in Sumatra (Jdihn.co.id, 2023). Then there was a change in policy to improve and assign tasks to PT Hutama Karya. The policy was issued, namely Presidential Regulation Number 117 of 2015 concerning the acceleration of the trans Sumatra toll road development. The content of the policy is that to accelerate the construction of toll roads in Sumatra, the Government gives tasks to PT Hutama Karya. The aim is to provide planning certainty and continuity related to funding and project costs. The last presidential regulation was born in 2022, the policy is presidential regulation number 131 of 2022 concerning the second amendment to presidential regulation number 100 of 2014 concerning the acceleration of toll road development in Sumatra. The trans Sumatra toll road development policy is not only sourced from presidential regulations. However, from the data obtained, there are approximately 3 policies from the minister of finance that regulate how to implement guarantees for accelerated development, procedures for implementing guarantees for accelerating development projects, and procedures for implementing guarantees for responsibility for accelerating the construction of the trans Sumatra toll road.

Therefore, based on the data and analysis carried out, it can be said that the construction of the trans Sumatra toll road was carried out during the administration of president Jokowi Dodo. The

Indonesian government in making efforts to build toll roads initially gave birth to a policy in 2014 on the construction of Indonesian toll roads. This is one proof that the government is very serious about equalizing infrastructure throughout Indonesia. Because the equitable distribution of road infrastructure will improve the country's economy and the welfare of the community (de Soyres et al., 2020; Kanwal et al., 2020).

4. Discussion

Infrastructure development is one of the goals in efforts to achieve SDGs in the context of utilizing industry, innovation, and infrastructure contained in point 9 of SDGs (Fei et al., 2021; Filho et al., 2022; Mansell et al., 2020). The results of the study show that since 2014 the Indonesian government has continued to make development efforts throughout Indonesia. One of the developments carried out is the construction of toll roads in Sumatra. The development effort is well patterned with a binding policy between the two parties. The first party is the government which functions to provide land and make regulations in planning road infrastructure development (Wu, 2022). Meanwhile, the company's role is to make investments and sign contracts for the management of toll road operations (Cheng et al., 2021). One of the reasons for the involvement of corporate companies in the development and management of infrastructure such as toll roads is because the government does not have sufficient budget to build infrastructure construction. This alternative has been done in many developing and developed countries in infrastructure development efforts because the government does not have much budget (Tamošaitienė et al., 2020). So that development cooperation between the government and companies can benefit each other.The advantage gained by the government is that it can accelerate the development process to increase the progress of a country. Then with the involvement of PT Hutama Karya, it can also provide benefits by managing toll roads by the contract agreement with the government. Evidence of the Indonesian government's success in collaborating with corporate companies in infrastructure development is the construction of toll roads with a total of 1996.64 Kilometers spread throughout Indonesia.

So that the company's involvement in infrastructure development will ease the government's burden in creating toll road infrastructure. However, the contract system for managing toll roads, especially the trans Sumatra toll road, takes a long time to take over and be managed by the government. However, it has become one of the risks and has been agreed upon before the toll road construction project in Sumatra. Such as the duration of the toll road management contract which takes 70 years. This is one of the agreements agreed upon by the government and the private sector to establish cooperation in toll road development. Thus, it is regulated through policies or regulations that bind the trans Sumatra toll road development cooperation. Policy in binding cooperation between the government and the company is very important to clarify the mechanism, contract, and profit (Jin et al., 2020; Westskog et al., 2020). Without a binding policy, there will be conflicts in road infrastructure development (Sutherland et al., 2020). That is one of the foundations for the Government of Indonesia so that investors can invest their funds to carry out development projects including toll roads in Sumatra.

However, what is still an obstacle in the development of the Trans Sumatra toll road infrastructure that prevents some toll road sections from operating is related to land acquisition issues. Land acquisition and compensation is one of the obstacles in infrastructure development

efforts (Thanh Truong et al., 2020), so it becomes a priority for the government and the company so that the construction of obstructed road sections can quickly operate. Land acquisition cases in the construction of the trans Sumatra toll road occur because there are several points of development locations that are in customary areas. The problem of land acquisition of customary land has resulted in the construction process stopping and not reaching the previously agreed operating target. Therefore, the government, the private sector, and all community leaders need to hold a meeting that can provide solutions so that the construction process of several sections of the Sumatra toll road can be completed on target.

Therefore, the government and the private sector in planning a development should have to clarify policies and finalize land acquisition issues before the construction process begins. So that the development process does not stop in the middle of the road which can cause state losses. On the other hand, it can reduce conflicts between the government and indigenous peoples because the location that will be used as a toll road is an area of customary land.

5. Conclusion

The role of limited companies (PT) is very strategic in the construction of the Trans Sumatra toll road to encourage the performance of the Indonesian government towards a developed country. So that the companies involved such as PT Hutama Karya and PT Waskita Sriwijaya Tol can contribute more to the development of the trans Sumatra toll road infrastructure. So that the government makes efforts to formulate policies that make it easier for national or foreign investors to cooperate in the development of construction projects in Indonesia. Then the government must clarify the contract system and the period of operation of the toll road after it functions. This is the initial foundation so that in the process of building the trans Sumatra toll road, it does not cause internal conflicts between the government and the company regarding the issue of toll fees and revenues. Regarding the revenue of the Trans Sumatra toll road that has been operating, it will be authorized by the company that has been assigned by the government through policy products.

However, there are implications related to the construction of the trans Sumatra toll road that cause delays in the operation of several road sections due to timeliness issues and customary land acquisition issues. For this reason, the government and the company must act quickly so that the problem can be resolved to accelerate the construction of the trans Sumatra toll road. As for the community land that is used as a path in the construction of the trans Sumatra toll road, it must be resolved clearly and provide compensation, instead of giving compensation due to the impact of development.

Therefore, the concept of public-private partnership in the construction of the trans Sumatra toll road project cannot fully accelerate the development process. This is because there are still toll road sections that have stopped due to customary land acquisition issues. Cooperation between the government and the private sector only has more impact on financing for the construction of infrastructure development. The policy design made by the government only focuses on cooperation between the government and the private sector but pays less attention to how to resolve community customary land.

This research encourages cooperative efforts between the government and maximizes the role

of companies in making efforts for equitable development of road infrastructure in Indonesia. besides that, this research is expected to be a consideration for the government so that in the process of infrastructure development it must complete the problem of land acquisition. So that the infrastructure development process does not experience delays and stops the construction process. Then in infrastructure development efforts the government and the private sector should not only examine how the development can run but must also pay attention to environmental aspects including land acquisition, forests, and customary land of the community. The limitation of this research is that it only discusses the role of the government and limited liability companies (PT) and the obstacles that occur in the trans Sumatra toll road infrastructure development efforts. With that, further research can be done by discussing more about the aspects of land acquisition and the impact of trans Sumatra toll road development seen from environmental, and socio-economic studies on the community.

Author Contributions

Conceptualization, VFI; methodology, VFI; formal analysis, VFI; investigation, VFI; writing—original draft preparation, VFI; writing review and editing, VFI; project administration, VFI, BR, RM, and ZN; supervision, VFI, BR, RM, and ZN. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

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