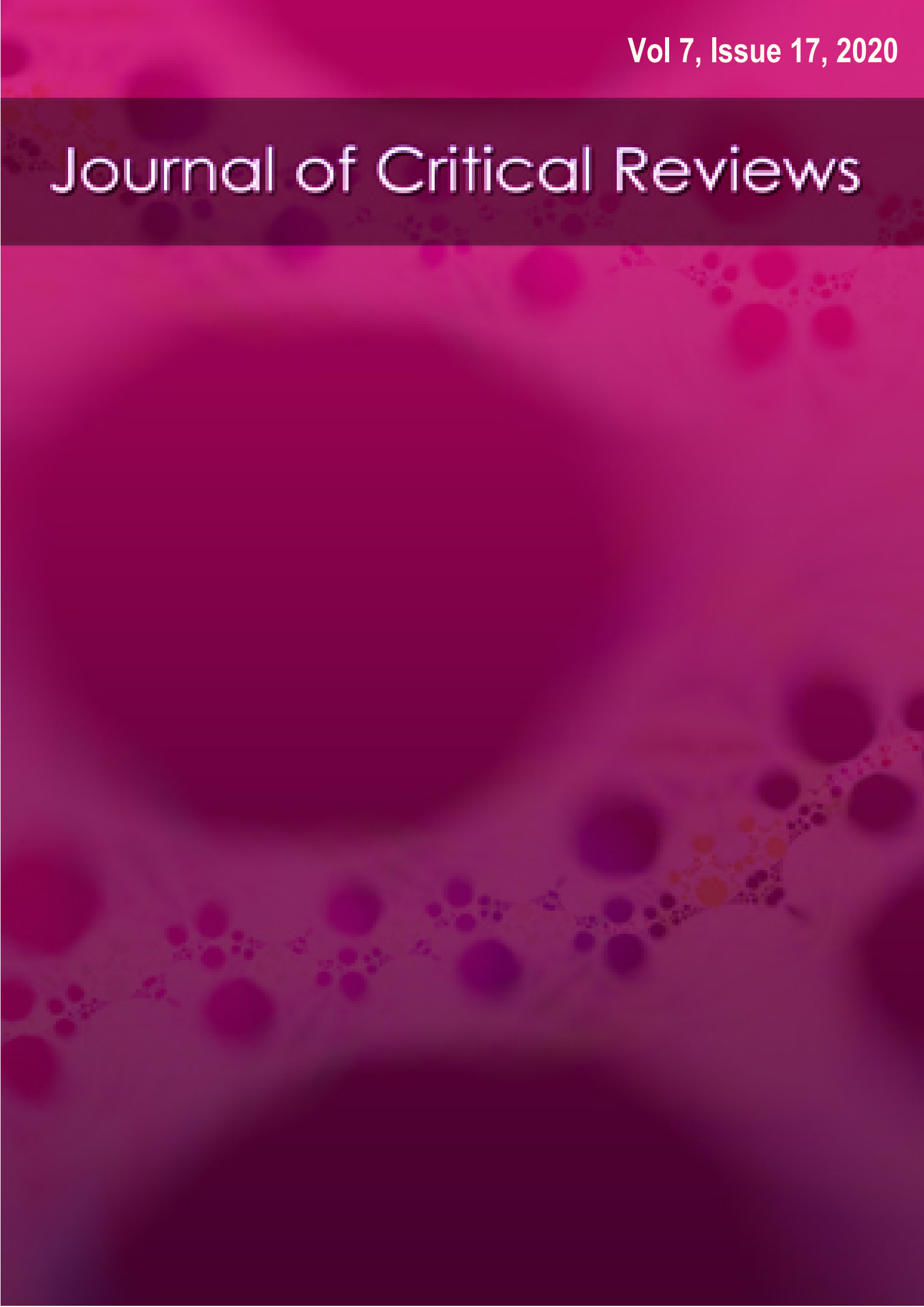


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# **ANALYSIS OF TECHNOLOGY TRANSFER IN THE TURNKEY CONTRACT OF STATE-OWNED ENTERPRISES IN INDONESIA**

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**ABSTRACT:** Turnkey Contract allows contractors to manage project work and provide price assurance for project owners but this opens up opportunities for contractors to manipulate quality and sometimes even cause industrial project failures due to lack of uniformity of machinery caused procurement of machinery that is entirely left to the contractor. based on this matter then the main issues to be studied is how the effectiveness of technology transfer and application of patent technology in Turnkey Contract? and what are the obstacles that arise in the application of patent technology in Turnkey Contract? the research method used is the normative juridical which focuses on the research of the law as the primary data and the relevant literature literature as secondary data. the results of the research indicate that the Transfer of Technology Transfer Period is fully governed by the contract agreement between the contractor and the project owner as stated in articles 69 to 77 of the Patent Law and articles 63 (3) point d of Presidential Decree No.16 Year 2018 point that turnkey contract especially those done by foreign contractor are restricted where they must form a sub contract to national company so that technology transfer can happen however the Decree didn't specify the detail of the technology transfer and because of that it falls to the regulation of 1313 KUHPer in which the technology transfer are done by agreement between parties. This may force the contractor as the technology owner to force their agenda.

**KEYWORDS:** Analysis, Technology Transfer, Turnkey Contract, State-Owned Company.

## **I. INTRODUCTION**

The emergence of cases of cross-country contracts that harm Indonesia especially in the field of licensing contracts basically occurs because of the principle of a civil license contract as in a patent for example, which is stated in articles 69 to 73 of the patent law which is carried out based on Presidential Regulation No. 16 of 2018 Licensing contracts on patents which are of course accompanied by the emergence of the principle of freedom in contracting are the basis for developed countries to extract the natural wealth of developing countries such as Indonesia. the principle of freedom of contract in a patent licensing contract has indeed been restricted but this article is felt by the author to be less effective because even though the Indonesian government procurement system has been regulated in presidential regulation number 16 of 2018, but in terms of determining the contract agreement between the government (Licensee) and contractor (Licensor) is not regulated in detail. And because this is an agreement, based on Article 1320 of the Civil Code, it is regulated based on the agreement of both parties and in this "agreement" there are often irregularities.

The practice of deviating a patent license contract can be seen in the practice of a received contract (Turnkey Contract), namely an Engineering Procurement Construction (EPC) transfer contract, also known as Turnkey Contract, which is reviewed in terms of contractor's authority because the contractor receives full authority from the employer and if In terms of the provision of project value, this type of contract is a type of contract whereby the contractor provides an estimate of the value of the project plus profit to the owner, which if approved by the owner, the value becomes the value of the project. The advantage of this work system is to make it easier for contractors to increase profits so that expenditures do not exceed the project value and facilitate reporting to owners because they have been estimated beforehand. This type of contract is made for development projects and development of business activities that are not only in the form of funds from the owner to the contractor but also accompanied by the transfer of how to operate or know how about the machine and other related processes (Operation and Manual maintenance) if previously agreed on in the contract. [1]

The Turnkey Contract does look promising because it makes it easy for contractors to manage project work and provide price certainty for project owners, but it opens opportunities for contractors to manipulate quality and sometimes even causes industrial project failures due to the absence of uniformity of machinery caused by the procurement of machines that are fully delivered to contractor.

Turnkey contracts that are often used in large project projects give the contractor the freedom to determine the building materials used as well as the factory machinery. This often becomes a problem because in tender competition, the contractor will hit the minimum price to win the project so that often the project results are not as expected as in the case of state gas companies in the procurement of meter and gas volume corrector devices or Electronic Volume Corrector (EVC) for each industrial customer of PGN (state gas company). There are various brands of EVC products from various companies, the results of various EPCs so that it actually makes it difficult for PGN itself because various brands have different modes of operation that make it difficult for the technology transfer process. [2].

## **PROBLEM STATEMENT**

The polemic of the Difficulty to regulate the ideal and effective transfer of technology in Indonesia are what makes the writer feel interested in analyzing it into a paper with the title: "The Analysis Of The Implementation Of Technology In The Turnkey Contract In Indonesia" with the main issues to be discussed in the discussion section as follows:

1. What are the weaknesses of technology transfer and the application of patent technology transfer in Turnkey Contracts?
2. How is the ideal solution to overcome the weaknesses of applying patent technology transfer in Turnkey Contracts?

## **II. METHODOLOGY**

The research method used in this study is the normative juridical legal research method, Abdul Kadir Muhamad [3] states that normative juridical legal research is legal research that examines written law from various aspects, namely aspects of theory, history, philosophy, comparison, structure and composition, scope and material, consistency of general explanation and Article by Article, formality and binding of a law and the legal language used. Legal research conducted by examining library material or secondary data, can be called normative legal research or literature law research. [4] With the problem approach method, namely:

- 1) Statute Approach
- 2) Analytical Approach (Analytical Approach)

Legal normative juridical research always focuses on secondary data sources. Secondary data on research can be divided into primary legal materials, secondary legal materials and tertiary legal materials. [5]

## **III. LITERATURE REVIEW**

The contract is basically an agreement whereby one person or more ties himself to one or more people as stated in Article 1313 of the Indonesian Civil Code. Self-licensing contracts basically exist in each type of intellectual property rights because intellectual property rights are intangible goods [6] so that their economic rights can be transferred which in this case the permit granted by the patent holder to another party through an agreement the right to be able to enjoy the economic benefits of a patent in certain terms and conditions.

In the patent license agreement, the basic provisions for licensing are regulated in Law No. 14 of 2001 concerning Patents, specifically in articles 69-73. But the details of the provisions regarding licenses in the form of implementing regulations up to now have not been established. This means that the technology transfer agreement is regulated by the Civil Code, while the granting of a patent license is based on the provisions of the Patent Law.

Based on this, the legal basis for regulating patent licenses uses general provisions in the Civil Code, provided that the freedom to make agreements will be limited by the provisions of Article 1320 of the Civil Code and Article 71 paragraph (1) of the Patent Law to minimize abuse. Through this patent licensing agreement, the technology provider grants the technology recipient the right for a certain period of time and with the terms and conditions that are mutually agreed upon, utilize and use technology and technology providers for a specific purpose. [7]

To be able to know more deeply about what technology transfer is, it needs to be seen first what is the definition of technology transfer in terms of etymology. If in terms of grammar, the term "transfer" or "transfer" is a translation of the word transfer. While the word transfer comes from the Latin *transfere* which means the distance of the cross (*trans*, across) and *ferre* which means loading (large).

The word transfer or diversion is widely used by experts in various writings, although there are those who use other terms such as "transfer" which is defined as the transfer of something from one hand to another, as well as passing or submission. This opinion emphasizes its literal meaning, another opinion with the term "devolution" while the

experts want the essence of its meaning by paying attention to the insights of adaptation, assimilation, dissemination or diffusion of the transferred object (technology). [8].

The technology itself according to Miarso [9] is a process that increases added value to use or produce a product that is basically not separated from other existing products, because it has become an integral part of a system.

According to Ety Susilowati [10], technology transfer is the transfer of technology from abroad as a technology owner (home country) adapted to a new environment as the recipient of a technology receiver (host country) and then there must be assimilation and application of technology into the economy of a country technology receiver. The technology must be able to be developed and produce new discoveries for further innovation.

The Indonesian government also provides a definition of technology transfer as contained in Government Regulation number 20 of 2005 the definition of technology transfer is stated as follows:

*"Technology transfer is the transfer of the ability to use and master science and technology between institutions, agencies or people, both in the domestic environment and those from abroad into the country or vice versa."*

Internationally, technology transfer is regulated in TRIPs article 7 and 8 but the provisions concerning technology transfer in Indonesia are further regulated in Law No. 18 of 2002 concerning the National System of Research, Development and Application of Science and Technology. The law, which came into force since July 29, 2002, states that technology transfer is the transfer of the ability to utilize and master science and technology between institutions, agencies, or people, both within the country and from abroad. and vice versa.

Related to technology transfer within the scope of IPR, Article 17 states that international cooperation can be endeavored by all institutional and technological elements to increase technology transfer from other countries and increase participation in the life of the international scientific community. This provision is then confirmed by article 23 which states that the Government guarantees the protection of IPRs owned by individuals or institutions in accordance with the laws and regulations.

Law No. 13 of 2016 does not explicitly state the need for technology transfer. Even so, the existence of provisions regarding patent licenses in the law indirectly mandates the transfer of technology through the granting of a patent license. The United Nations Center on Transnational Corporation defines technology transfer as a process of mastering technological capabilities from abroad that can be broken down into three stages, namely [11]:

1. The transfer of existing technology into the production of certain goods and services.
2. Assimilation and diffusion of these technologies into the economy of the recipient's country of technology.
3. Development of indigenous technology capabilities for innovation. What is meant by indigenous technology are: the ability to solve the technology offered, mastering imported technology, introducing new things The method of transferring technology itself, according to Suteki can be done in various ways, both commercial and non-commercial.

For non-commercial use, the government usually use the following programs [12]:

1. Sending workers abroad to learn a knowledge
2. Utilization of information technology contained in foreign publications to the government
3. Use of expertise from outside country
4. Cooperation program between countries.

After knowing about what technology transfer is, the next thing the writer will discuss is Turnkey Contract. The Turnkey Contract is one of the ways to transfer technology commercially, in which the nature of the contract is short-term. Duncan Wallace gives a definition of what is Turnkey Contract [13], namely:

*"... a Contract where the essential design emanates from, is supplied by, the Contractor and not the owner, so that the legal responsibility for the design, suitability and performance of the work after completion will be made to rest ... with the Contractor ... 'Turnkey' is treated as merely signifying the design responsibility as the Contractor's."*

Duncan means that the Turnkey Contract is a contract where the essential design does not come from the owner (in the case of a patent is a licensee) but from a contractor. So that the legal consequences of the design, suitability and performance are entirely in the hands of the contractor. Turnkey here is a symbol that the owner fully agrees to the design responsibilities of the contractor. The term Turnkey in the Turnkey Contract refers to something that is ready to be used immediately, generally used in the sale or supply of goods or services. The word Turnkey means that customers, after receiving the product, only need to turn on the ignition to make it operational. Turnkey is



often used to describe a house built on the land of the developer with the financing of the developer ready for the customer to move. If the contractor builds a "Turnkey over the house" they frame the structure and complete the interior. Everything from cabinets to carpets. "Turnkey" is generally used in the construction industry, for example, where it refers to bundling of materials and labor with sub-contractors. "Turnkey" is also commonly used in motorbike sports to describe cars sold with drivetrain (engines, transmissions, etc.) or for vehicles sold without multiple components so that the old components can be reused in new engines. The term Turnkey can also be used to advertise the sale of an established business, including all the equipment needed to run it, or with a business-to-business supplier providing a complete package for start-up businesses. An example is the creation of the "Turnkey hospital" which will build a medical center complete with installed with complete medical equipment so much that it can be said that the licensee need to only accept the "doorkey" to the hospital.

#### **IV. DISCUSSION**

##### **The Weakness of technology transfer and application of patent technology transfer in Turnkey Contracts by State-Owned Enterprise in Indonesia**

The Submission of a technology or license (license) from licensor to licensee needs to be subjected to a number of terms and conditions that must be met by both parties [14] because in these terms and conditions each determines the "business expectation" of the agreed legal commitment. Through these terms and conditions, the rights (expected benefits) and obligations (sacrifices) of each party are set balanced and fair.

Although with such rules that are rigid in regulating technology transfer, the ideal transfer of technology is still difficult because as in general contracts, it depends on the agreement between the two parties.

The Turnkey Contract is often used in housing construction projects where developers submit entirely to the contractor until the interior design, but often the Turnkey Contract is used by the government because of its ease. Examples of the use of Turnkey Contracts by the government can be seen in the case of PNG procurement. [15] This case is an example of how technology transfer is carried out that sometimes makes industrialists experience industrial project failures because the technology of the machine or process is not right or the technology is poor and effective.

What happened at PGN, although it did not cause industrial project failures, but various EPCs with various contractors for various Engineering projects in the development of gas distribution activities caused the existence of machines that were technically similar but different due to different suppliers of these machines. For example for meter corrector and gas volume devices or Electronic Volume Corrector (EVC) for each PGN industrial customer. There are various brands of EVC products from various companies, the results of various EPCs.

These EVCs do not have a uniform and open modbus protocol, so that system integration cannot be done. This inefficiency was experienced by the Information Technology and Systems Division, because of the different protocols this division experienced difficulties in collecting gas usage data by industrial customers to be included in an integrated system.

As previously explained, related to the three stages of the technology transfer process when it is associated with the PNG case, it can be said that PNG in accepting technology transfer is still at the stage of transfer of existing technology into the production of certain goods and services. After moving away from the need for a more efficient meter corrector, since 2006 the system and information technology division formed its own R & D team with budget funds allocated separated from the rest of the budget - another work budget to develop a corrector device that has a uniform and universal modbus protocol thus facilitating integration in the system. in this case the application of technology transfer from PGN succeeded in reaching the second stage of the stage of mastering technology transfer namely technology assimilation and diffusion.

Examples of case examples can be used as facts about the effectiveness of technology transfer in the Turnkey patent licensing contract because of the lack of interference from the contract provider (government) so that full control falls on the contractor. This has resulted in a lack of effective and efficient technology transfer.

##### **Ideal Solution in Overcoming the Weaknesses of Patent Technology Transfer Applications in Turnkey Contracts in Indonesia**

To be able to overcome the less-effectiveness of technology transfer in Turnkey licensing contracts, the authors borrow from Friedmann's theory that the law consists of three main components, namely substance, structure and legal culture. [16] For this reason, an analysis of the effectiveness of patent licensing contracts in Indonesia will be reviewed based on the 3 main components above.

###### *1. Judging from the Substance of the Law*

In terms of legal substance, there are two important regulations that underlie the practice of technology transfer in Indonesia. first Law No. 13 of 2016 concerning patents, there are several issues with regard to granting a patent license for the benefit of technology transfer in Indonesia concerning two types of terms, namely an exclusive patent license and a non-exclusive patent license. Law No. 13 of 2016 regulates special rights for patent owners or patent holders to make, use, or sell their own patented products or processes or give others licenses to make, use or sell the patented product or process. The difference between licenses that are exclusive and non-exclusive is not clearly explained. Article 69 only states that the patent owner has the right to grant a license to another person based on a license agreement and covers the scope of all actions during the license period in the entire territory of Indonesia.

Article 70 states that unless otherwise agreed, patent holders may still carry out their own or give licenses to other third parties to carry out their actions. Thus, it can be interpreted that Indonesia adheres to a type of patent licensing agreement that is non-exclusive. However, the limitations of what is exclusive and non-exclusive division are no longer included in this law.

Second, presidential regulation number 16 of 2018 concerning the procurement of government goods and services. This presidential regulation was issued in order to support large government projects in the infrastructure sector which would open opportunities as wide as possible to transfer technology from outside countries. As can be seen in section 63 (3) d which requires foreign companies to be able to participate in tenders to run Indonesian government projects must cooperate with domestic companies either through consortium subcontracts or other cooperation programs that allow the transfer of technology and investment to company companies the national.

But here that must be a concern is the specification of the cooperation program which is not detailed, when the technology is transferred, how is the process and others. This certainly makes the arrangements for the process of technology transfer back to article 1320 of Indonesian Civil Codes namely the freedom between the two parties which of course "freedom" here is not completely free, because the Licensor whose position is higher than Licensee certainly makes the Licensor position higher so that it is free to determine the clause in the contract.

Compared to Japan, they adhere to two types of licensing agreements [17] namely the exclusive agreement of *sen-yo (sen'yo jissshi ken)* for exclusive use rights, and *tsujo (tsujo jissshi ken)* non-exclusive license, which is the usual use rights or license non-exclusive. In the *sen-yo* exclusive license agreement, this license agreement is invalid for third parties until the agreement is registered in the local patent office register book. Only after the process does the licensee have the right to stop other parties from using unauthorized or unauthorized use of the patented invention. In addition, the licensee also has the right to prosecute through a court of litigation against the violations that occur. This is because the exclusive licensee *sen-yo* has the exclusive right to use the patented invention so that the licensor or patent owner cannot use the patented invention in the licensee's territory, if he does not obtain permission from the licensee. [18]

With the unclear regulation regarding the type of patent license agreement in Law 14 of 2001, in practice it has the potential to weaken the position of the licensee because it is only based on an agreement between the two parties, without regard to its exclusiveness. The weak position of the licensee will affect the use of the expected technology. Moreover, the tendency of licensing parties who actually come from developing countries who tend to have a weak bargaining position, if they enter into agreements with parties from developed countries.

## *2. Judging from the Legal Structure*

Regarding the patent license for the interests of technology transfer, the Directorate of Patent of the Directorate General of Intellectual Property Rights, Ministry of Law and its Regulations are an excellent Bodies capable to handle the problem. Some problems also arise such as the registration flow mechanism which tends to be complicated and the length of the bureaucratic chain that must be passed. In addition, there is still a lack of online access to information that makes it easy for parties who want to register a patent license. In Indonesia, the collaboration between bodies that have authority in handling patents has not run optimally yet. It is often seen that they highlight the sectoral ego in work. There has not been seen a close chain of synergy between the Patent Office in Indonesia and other institutions such as the KPPU which handles monopolistic practices and unfair business competition.

## *3. Judging from the Legal Culture*

In the term of Legal Culture, especially in relation to Turnkey Contracts according to Lisa Bernstein [19], is unique, because basically whatever the rules are given, will be difficult in its application because in the world procurement project system itself is difficult to reach the law, because they have their own structure and substance. In today's modern world, the economic system is already so complex, where every single supplier of goods has a relationship with other suppliers. Form a complex and structured network. Form a culture of its own. This culture is so strong

that it cannot be touched by positive law. Even so in it also still knows "law" where there will be sanctions imposed in the system if he violates the rules set by the system. In relation to the process of technology transfer in Indonesia, the weaknesses that must also be addressed are the legal culture. As explained above, basically the law is not as strong as the law enforcers desire, because the law consists of substance, structure and culture so that with a lack of strong culture itself the law cannot stand upright, and be ignored by its own people. In order to implement effective technology, according to Kholis Roisah, [20] it is necessary to renew the IPR legal system in Indonesia which accommodates the value of communal and spiritual Indonesian local wisdom so that the legal system of IPR can be more grounded and if viewed from Grundnorm Indonesia namely Pancasila, the legal system of IPR must be subject to Pancasila, even though it is inherited from abroad. Intellectual property rights that have communal value are important, because in carrying out their functions, the law cannot be separated from the influence of society, because law is a means of society and works in society. Therefore, a rule of law cannot be separated from ideas and opinions that live among the community. Like two blades, they can be an inhibiting indicator while being able to provide social facilities in applying a rule of law

Legal culture according to Friedmann is defined as a pattern of knowledge, attitudes and behavior of a group of people towards a legal system. from the above understanding it appears that legal culture is the framework or foundation of the law itself because with the existence of changes in legal culture, the substance and structure naturally change to follow it.

Conditions that occur in the community related to intellectual property which in this case the transfer of technology are not so. Technology transfer or even IPR is generally a derivative product of TRIPs which is not the product of Indonesian culture. IPRs that are very focused on individual attitudes basically do not match the style of Indonesian society that is still communal. Indonesian society is also broadly still many who do not know abstract concepts such as intellectual property rights.[21]

Lack of public knowledge about the importance of intellectual property rights knowledge is often a bad impact in the licensing contract making process. In a licensing contract with the Turnkey Contract method for example, the purpose of the Turnkey Contract that facilitates licensee in obtaining technology transfer will have the opposite effect, the technology obtained is not yet effective so that its implementation is still less effective.

In relation to technology transfer in the Turnkey patent licensing contract, especially in large-scale government projects that demand speed of work and limited funds that require the government to use the Turnkey Contract system, enforcement of Article 71 paragraph (1) of Patents must be done even though there are no government regulations as operational rules governing it because this article is a mandate from the 1945 Constitution article 33 paragraph (3) that the earth, water and natural resources contained therein are controlled by the state and used for the magnitude for the prosperity of the people not for the benefit of certain parties. For the Turnkey Contract itself, there are various ways to overcome the ineffectiveness of this contract system, using its Turnkey-plus contract, which is to make the developer get a long-term financial interest in the project. For example, the builder will build a form of retail business for the owner, and the builder will receive a percentage of gross revenue for a certain period. This can encourage builders or developers to make development decisions based on the long-term needs of the project, not just the short-term decisions needed to get the job done. [22]

The implementation of this Turnkey-plus contract is for example in PNG, in binding a contract with a contractor, he adds the interest clause to the project so that even though the contract has been completed and full control is given to PNG, the contractor still gets interest from the project that has been completed. the contractor to improve the quality of workmanship and allow the contractor to carry out periodic maintenance on the results of the project to change the nature of the Turnkey Contract which was short-term to become a Long-term which certainly increases the possibility of technology transfer.

## **V. CONCLUSION**

1. The implementation of Technology Transfer in the Turnkey Contract is fully regulated by a contract agreement between the contractor and the project owner as stated in articles 69 to 77 of the Patent Law so that the effectiveness of the implementation of technology transfer and the implementation of the technology itself depends heavily on the contents of the contract agreed by both parties. Therefore, project owners, especially state agencies such as the State Gas Company, must be careful in making contracts to achieve the expected results and be able to usher Indonesia into the stage of technology transfer where the development of indigenous technology for innovation. What is meant by indigenous technology is: the ability to solve the technology offered, master the imported technology, introduce new things

2. The effectiveness of technology transfer in the Turnkey patent licensing contract due to lack of intervention from PNG so that full control of the contractor results in a system imbalance that creates difficulties in integrating the system as in the case of EVC Procurement in PNG besides the principle of freedom of contract in a licensing

contract Turnkey patent which is not accompanied by a PP specifically regulating further article 71 paragraph (1) of the patent law will result in losses for the Indonesian side in a licensing contract especially considering that at the end of 2015 there will be an MEA namely the economic integration program in Southeast Asia where the flow of funds will flow swiftly to Indonesia as one of the countries with abundant natural wealth there will be concerns that government project projects, especially related to technology transfer, will stumble because the implementation is still ineffective. large-scale government projects that demand speed of work and limited funds that require the government to use the Turnkey Contract system so that the enforcement of article 71 paragraph (1) of Patents must be done even though there are no government regulations that are operational rules governing it because this article is mandated by the constitution 1945 Article 33 paragraph (3) that the earth, water and natural resources contained therein are controlled by the state and used for the magnitude for the prosperity of the people not for the benefit of certain parties. For Turnkey Contracts themselves, there are various ways to overcome the ineffectiveness of this contract system, using its Turnkey-plus contract, which is to make the developer get a long-term financial interest in the project.

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