

# Role of National Council for Aeronautic and Space of Republic Indonesia (DEPANRI) from Institutional Economic Perspectives

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**Keywords:** DEPANRI, Institutional Economy, Social Capital, Transaction Costs.

**Abstract:** National Council for Aeronautic and Space of Republic Indonesia (DEPANRI) the highest coordination forum that has the task of formulating aeronautics and space policies in Indonesia, which president is the chairman. In other countries this council has an important role and still exists today, but its was dissolved. The purpose of this study is to see the role or contribution of the National Aeronautics and Space Council (DEPANRI) as long as it stands from an institutional economic perspective. Descriptive approach with unit of social capital analysis and transaction cost become analysis tool in this research. The results obtained are (i) the low participation of members and commitment in the members of DEPANRI were description of how asymmetric information, low interest of the member to space issues (not become priority), and not reapons and watched presidential transtition thats all be a part of social capitall, which be the factor of DEPANRI organization is not optimal, and (ii) low cost of political economy transactions and low organizational managerial implementation becomes one of the factors urgency of the existence of DEPANRI that do not carry out optimally their functions.

## 1 INTRODUCTION

National Council for Aeronautic and Space Of Republic Indonesia (DEPANRI) is one of the Non-Structural Institutions (LNS) which was dissolved by the government in 2014. It's was the highest coordinating body in formulating aeronautic and space policy in Indonesia. The existence of such councils in the fields of aerospace namely aeronautics and space in several countries such as the United States, Japan and Brazil is a structural institution strategic nature and still survive until today. The existence of DEPANRI since its inception in the 1960s, has undergone several changes in organizational structure. DEPANRI is an organization whose initial goal is to assist the President of Indonesia in formulating general policies in the field of aeronautics and space.

DEPANRI institutional funding as a public institution originates from the state budget (APBN), which has undergone a transformation into the body of a public organization of the National Aeronautics and Space (LAPAN). The DEPANRI budget merged into one ceiling in the LAPAN budget, as the DEPANRI secretary. The Institute of Public

Administration (LAN) recommends the abolition of DEPANRI which is the basis for the dissolution of this organization. This dissolution is one indicator of failure in the concept of institutional economy where there is asymmetric information from organizational units in carrying out their functions, where the performance of the institution is considered inefficient. The important role of institutions in economics is a means of reducing uncertainty or turning it into a risk. The decrease in uncertainty will reduce transaction costs, so transactions (markets, management and politics) will increase (Azansyah, 2013).

Institutional economics tries to analyze the problems that arise from the dissolution of DEPANRI according to the institutional point of view. Jaya (2004) in his research tried to see the contractual relationship between principals in the concept of state, namely constituents with representative agents. DEPANRI has a performance contract with representatives of the people in terms of running the organization according to their duties efficiently. The new institutional economy builds its idea that institutions and organizations strive to achieve a level of efficiency and minimize overall costs, where the concept of overall costs, not only in the form of

production costs such as the concept of neoclassical economics, but also transaction costs (Santoso, 2008). Therefore, how the process of DEPANRI's performance before it was dissolved became an interesting analysis amid the development of the existence of similar councils in international forums. In this study, we will discuss (i) how DEPANRI's role or social capital contribution to performance output, (ii) DEPANRI's managerial influence on transaction costs.

This research is intended to see the application of institutional economic analysis (social capital and economic transaction costs) of DEPANRI before being dissolved by the government, and knowing the dominant factors that affect the high and low economic transaction costs which then affect the performance of these institutions which are considered inefficient.

## 2 LITERATURE RIVIEWS

In analyzing institutional economics, it is not only centered on economic transaction activities but also on social actions. This action is an action needed to establish, maintain and or change social relations (Weber, 1968), including the establishment and efforts to maintain an institutional framework where the process of economic transactions can occur. Both rules that are formal or informal, including the character of coercion, are components therein. Political transactions are very significant, namely transactions that occur between people involved in politics, bureaucracy and interested groups.

According to Williamson (1979: 239), both political transactions and economic transactions are characterized as follows:

- a. Uncertainty;
- b. Frequency, where transactions often occur; and
- c. The degree or level of occurrence of transactions-including investments in them.

Transaction costs arise because of the occurrence of economic activities among actors in the community, namely the use of resources needed including social transactions (including economic transactions in them). Defining transaction costs based on Richert and Furuboth, (2000) are costs for using the market (market transaction cost) and the cost of exercising the right to give orders within the company (managerial transaction cost). Besides that, there is also a range of costs associated with moving and adapting to the institutional political framework.

This transaction fee arises because the transfer of property rights in this case is the result of

technological innovation. In economic activity there are two types of costs, namely costs related to the production and physical distribution of an item or service and both the costs required for an exchange. The total economic costs are not only determined by the production costs (technology and inputs used) but also the transaction costs determined by the institution. Transaction costs are substantial. Based on some estimates, transaction costs in the modern economy market range from 50-60% of net national products. The development, the economic theory of transaction costs is used to measure the level of efficiency of institutional design, where high transaction costs are one indicator of the inefficiency of existing institutional design (Sukarsih and Gunawan, SD, 2012). Furuboth and Richert (2000) divide transaction costs into three types of costs, namely market transaction costs, managerial transaction costs and political transaction costs.

Institutional efficiency is one way to improve economic and institutional growth which is considered efficient if transaction costs are low (Furubotn and Richer, 2000), and social capital has a positive effect on economic growth (Lapavitsas and Fine, 2004). Social capital is the norm, trust and network that is embedded in the social structure of society that can facilitate collective action for mutually beneficial relationships (Porter, 1998). The essence of institutional analysis is how formal rules (contracts, organizations, political law and systems, markets) informal rules (systems of values, norms, traditions, religions, and habits) and enforcement mechanisms are applied in people's lives. This means how the DEPANRI institution has so far run the organization and produced efficient performance by looking at the development and allocation of transaction costs and the social capital that is formed in it in coordinating work between institutions, to achieve the objectives of aerospace development.

## 3 METHODS

This study uses a deskriptive analysis aims to carry out exploration and classification activities on economic transaction cost data and social phenomena that occur in organizing DEPANRI. According to Loeb, Susanna, et.all (2017), descriptive analysis characterizes the world or a phenomenon— answering questions about who, what, where, when, and to what extent, and the goal is to identify and describe trends, or describe samples in studies aimed at identifying causal effects, description plays a critical role in the scientific process in general and

education research in particular. The method of data collection is done by conducting literature studies, and documentation analysis. The data that used were secondary data from LAPAN, internet, journals or other.

## 4 RESULT

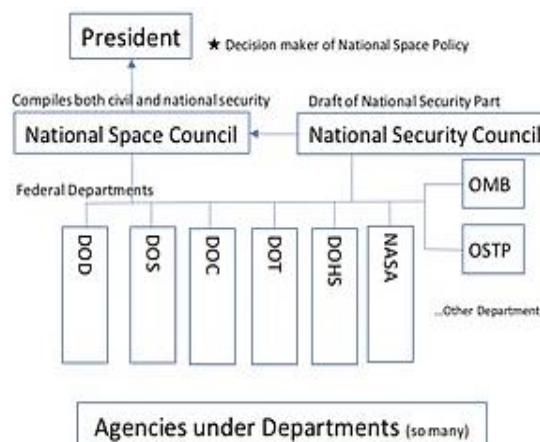
In this discussion, it will be analyzed in terms of the urgency of the existence of the council in aeronautics and space in international forums, then followed by an analysis of the contribution of the role of DEPANRI and the formed social social capital, and analysis of DEPANRI's economic transaction costs.

### 4.1 Urgency of Council Needs

The existence of similar councils in several countries is one of the driving factors for the urgency of the role of DEPANRI in Indonesia. In this section we will see how strategic level organizations like DEPANRI in the United States, and India.

In 1958 (Based on the National Aeronautics and Space Act of 1958), institutional coordination in the handling of the United States Aeronautical and Space (Aeronautical and Space) was handled by the National Aeronautics and Space Council (NASC), namely an aeronautical coordinating agency in the United States called under the name "Council". The Council advises and assists the President regarding national space policy and strategy and is directed to review United States Government space policy and develop a strategy for national space activities. The Council also fosters close coordination, cooperation, and technology and information exchange among the civil, national security, and commercial space sectors. Additionally, the Council advises the President on participation in international space activities (NASA, 2017). The Council is assisted by an Executive Secretary with no more than three staff. In the government of President George H.W. Bush formed the "National Space Council" (NSpC) (1989 to 1993) which was a little more narrow in scope than NASC. The newly formed NSpC members include: Vice President; Minister of Foreign Affairs; Ministry of defence; Minister of Trade; Minister of Transportation; Director of the Office of Management and Budget; Presidential Chief of Staff; Assistant President for Security; Director of Central Intelligence; and NASA Administrator. NSpC is headed by the Vice President. The implementing institution is the National Aeronautics And Space Administration (NASA), led by an Administrator and

a Deputy Administrator, and is responsible directly to the US President (Nasution, et.al, 2010, and NASA, 2017).



Source: Uchino, Takashi (2018)

Figure 1: Governmental in Space Policy of United States.

Indian aerospace activities are coordinated by the Department of Space (The Department of Space - DOS). DOS is assisted by the Space Commission, and the Insat Coordination Committee, and Planning Committee of the Natural Resource Management System. DOS, among others, oversees various institutions such as:

- ISRO;
- National Remote Sensing Agency (NRSA);
- NNRMS;
- PRC;
- NMFK; and
- Space Corporation

By looking at benchmarking above, it can be seen that the existence of a kind of council has a strategic position under the President in order to coordinate all sectors that have an impact in the field of aeronautics and space. This is actually in line with the authority inherent in DEPANRI, where the initial formation in 1955 with the legal basis of Government Regulation Number 5 of 1955, dated February 3, 1955.

### 4.2 Performance of DEPANRI form Social Capital Perspektive

The DEPANRI organization underwent a change in terms of matters including aeronautics but also space (joint Law Number 83 of 1958 concerning Aeronautics, December 27, 1958 and Republic of Indonesia's Presidential Decree Number 99 of 1993, October 26, 1993 concerning DEPANRI). The

organization of DEPANRI can be seen in Figure 2 about the National Aerospace Organizational Structure where, the President of the Republic of Indonesia as chairman, Minister of Research and Technology as the vice chairman, and chairman of LAPAN as secretary.

The function of the DEPANRI Secretariat (Nasution, Husni, et. Al. 2010) was held by LAPAN, and all funding needed for the implementation of DEPANRI activities was integrated on LAPAN budget. Before, DEPANRI and LAPAN are independence institution or separate, but then there was a merger. LAPAN in carrying out its duties and functions as the DEPANRI Secretariat appoints one of its organizational units, namely the Center for Aerospace Analysis and Information (Pussisfogan, now its called Center for Aerospace Policy). Pussisfogan has the task, among others: "...preparation of materials and assessment of materials in order to carry out the tasks and functions and secretariat of DEPANRI." In the United States have secretariats for the conference body (Uchino, Takashi, 2018), and the same as the DEPANRI secretariat function.

Previous time the organization only held 2 congresses and 1 session:

- a. Organization of the First DEPANRI May 28, 1999;
- b. Implementation of the First National Aerospace Congress, 3-4 February 1998;
- c. Implementation of the Second National Aerospace Congress, December 22-24, 2003;

When compared to how a similar council works in the United States during the Trump administration, after 2016 at least the National Space Council has held meetings until 2019 as many as 5 meetings or meetings during Mike Pence's leadership, on the contrary DEPANRI from until 2014, there has never been a congress or national space council meeting with lead by President, the last in 2003 during President Megawati's administration. How the team and working group can convey and become a policy in the field of aeronautics and space if there is no meeting between DEPANRI members namely the president and its members, or some kind of congress in 1998 and 2003. From the above, it shows that the problem of coordination of work between members of DEPANRI which contains a minimum of echelon 1 (ministerial level) is very difficult. This shows that it is difficult to realize strong political will on government policy in the field of aeronautics and space and coordination of work between agents and also with principals. From this, it shows that there is

a channel of information or asymetris information that is interrupted between agents and principals. Even though there is a contract that must be fulfilled, that is, the function of the council must be carried out.

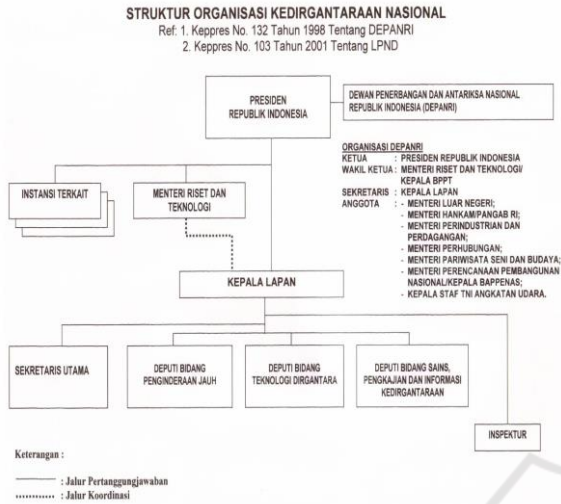
If we see the competence of the organisation, the membership of DEPANRI is the same as the structure of NSpC or National Space Council US, which consists of the President and the Ministers. The cairman of DEPANRI is Indonesia President, with the member are Minister for Foreign Affairs, Minister for Defence and Security, Minister for States Development Planning, Minister for Trade and Industry, Minister for Research and Technology, the Chief off Staff of Indonesian Air Force, Minister for Tourism, Art and Culture, Minister for Telecommunications, Minister for Transportation, the Chief off LAPAN and other institution (see Figure 1) (Wiryosumarto, H, 1999; Nasution, Husni, et.al. 2010)

The conditions of trust and commitment of the holders of DEPANRI's authority are very low. It has not been a priority issue for decision makers in our country to be one barometer of the low intensity of meetings with members. Even though in terms of utilization and independence, the issue of aeronautics and space is a significant sector in developed countries, even in Indonesia. The high dependence of these 2 sectors is not only felt at the government level but also by the wider community. For a number of countries the two sectors are related to the mastery of sensitive technology concerning state sovereignty and state ownership rights, so that the regulation of resources within it, both aeronautics and space exploration, is an important concern, in contrast in Indonesia.

The weak coordination and political will of the members of DEPANRI became an LNS that was not optimal in its duties and functions, even though according to Wiryosumarto (1999), the the council function as a higets national coordination and general policy formulation forum in Indonesia aeronautics and space development. Awareness of the importance of the functions of the DEPANRI-level body in various countries, one of which can be seen in the United States that has mastered space technology is a comparison that should be seen. In June, 2017, President Trump signed an Executive Order to Revigorate the National Space Council, where appointed Vice President Mike Pence to serve as the Chair as a part of re-establishing of the national space council (NASA, 2017, and Vedda, James A. 2016). The interesting thing is how this organization still exists and works to this day, behind the dynamics of changing leaders and government. Therefore, the



author himself regretted the conditions in Indonesia, where DEPNARI was dissolved in 2014, and there was no role for the institution or the structure of other government organizations that held the role of the organization



Source: Wiryosumarto, H, (1999)

Figure 2: Organizational Structure of DEPNARI.

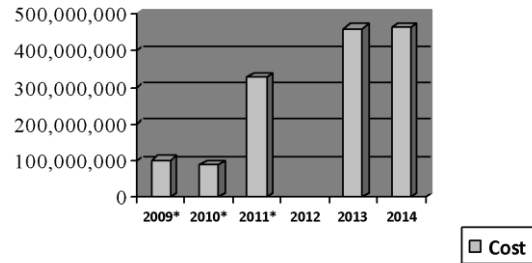
### 4.3 DEPNARI's Managerial Institution for Transaction Cost

In running the DEPNARI organization, which originates from the LAPAN budget, it is reflected in the DEPNARI secretarial implementation budget from echelon 2 level work units. The mechanism of the organization is run at echelon 2 and below by forming technical committees and working groups which are reflected in the types of expenditures on their economic transaction costs. In supporting its activities, economic transaction costs for managerial are only reflected in the general expenditure component:

- salary for teams and working groups;
- material expenditure; and
- activities of meetings and seminars.

DEPNARI's organizational functions are reflected in the managerial side of the organization reflected in transaction costs, where coordination costs are low, where political lobbying costs and other costs are part of the national coordination forum led by the President. From 2009 to 2014, the congress had never been held. To operational secretariate, since 2009 until 2014, were under Rp 500 million, its means they were low of interest from the budget planner and they didn't know that its strategic program, and not priority. If we see how much LPDP sponsoring 1 research grant that can reach Rp 500

Million in Indonesia, so the nominal budget is so limited to conduct a meeting or national coordination (see Figure 3).



Note \*: realisation

Source: Center for Aerospace Policy (2012;2013), data proceed

Figure 3: DEPNARI Secretariat Budget (IDR).

The low cost of political transactions that have an impact on the low transaction costs of DEPNARI organizations is an indicator of performance assessment where the expected output of tasks and organizational functions is not achieved. Where in general, the DEPNARI scope of activities carried out by Nasution, et. Al (2010) are grouped into:

- a. activities for formulating national policies and strategic plans (development and cooperation);
- b. the establishment of national aerospace institutions;
- c. designing national aerospace rules and regulations;
- d. designing ratification of international aerospace laws and regulations;
- e. formulation of basic positions and attitudes of Indonesia in international political forums;
- f. organizing coordination through Council Sessions, Congresses, Work Meetings, Group Technical Meetings, Interdepartmental Technical Meetings, and Scientific Forums;

Judging from the urgency of the existence of an organization involving the chair and members, then the budget post that has been compiled with low or minimal political transaction costs, shows the organization's organization is not optimal. Nasution (2010) revealed these problems due to factors:

- a. the composition of DEPNARI has not been adjusted to the composition of the United Indonesia Cabinet for the period 2004 – 2009;
- b. the DEPNARI Working Procedure has not yet been compiled so that the DEPNARI Working

- Group and the DEPANRI Working Group's duties and functions are unclear;
- c. since the DEPANRI technical team is currently not working optimally;
  - d. the existence of various DEPANRI working groups by the Secretary of DEPANRI has not carried out their duties and functions optimally;
  - e. the DEPANRI secretariat as a driving force for DEPANRI has not worked optimally as evidenced by the many tasks and functions that have not been implemented; and
  - f. membership of the technical committee and working group is very dynamic with regard to the transfer of officials to their respective agencies.

The space community has watched each presidential transition to see how the new administration would handle decision making on space policy and strategy, from leadership in response to the presidential transition (Vedda, James A. 2016), and this was not done managerially in DEPANRI. In the USA, while the President does not chair the Space Council, a role left to the Vice President (Uchino, Takashi., 2018).

#### 4.4 DEPANRI Products

Depanri has annual performance products, which become the annual president's report. In the United States, NSpC or NSC compiles the president's annual report in a good summary of the Government's aerospace activities each year. Mandated by law, it contains information on aerospace activities conducted by 14 Federal departments and agencies, as well as appendices containing useful historical data on spacecraft launches and budget figures (NASA, 2017), and how the president determines overall national space policy as well as civil, commercial, and national security space policy (Alver, James G and Gleason, Michael P, 2018)

DEPANRI's product is formulating aeronautics and space policies as national guidelines, in this case such as national space policy. Until now, Indonesia does not have a national aerospace policy product. DEPANRI is still relevant as the highest coordination forum and needs re-establishing to the future because the cabinet of office or other institution havenot the authority like that. There are coordinator ministry in cabinet structure or other LNS didnot have a function as DEPANRI on aeronautic and space. LAPAN's position is liked NASA's position, while NASA focused on a mission such as research and development (Uchino, Takashi., 2018).

Based on Vedda, James A (2016) recommendation to National Space Council in the US, that its relevance with DEPANRI, so from this research strategy to re-establishing DEPANRI to be successful such a council should consider:

- 1) The president's level of interest must be sufficiently high to allow aeronautics and space issues a place on the agenda over time.
- 2) Productive relationships with Congress and relevant agencies must be maintained, it means that to create political transaction cost in the form of national congressional activities led by the President,
- 3) Organizational structure and staffing are critical to the efficient operation of interagency policy-making mechanisms, and follow-up on policy implementation. The council staff needs to have adequate size and expertise and a good relationship with the Office of Management and Budget staff working on space related budgets,
- 4) The council and its staff must recognize that events beyond their control drive the agenda, so they must be agile enough to quickly adapt, and
- 5) Regardless of the formal mechanisms the council may adopt, informal interactions and individual personalities matter as part of a form of social capital.

## 5 CONCLUSION

From the analysis above, it can be concluded as follows:

- 1) The low participation of members and commitment in DEPANRI members is a description of weak social capital which is a factor in DEPANRI's organizational role not optimal and inefficient performance, and
- 2) The low cost of political costs and managerial that reflect transaction costs that do not carry out optimally their functions, because there is an expected output gap with non-linear organizational funding. Organizational and managerial structures reflected in transaction costs do not pay attention to the organizational environment like presidential transition, so that reflected post-2003 stagnation

Suggestion:

From this study, the authors suggest that need for re-establishing DEPANRI back as a council with the function, supported by a mechanism of good social

capital between members and an adequate financing structure according to the needs of the organization.

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