

ANALYZING CHINA'S DEFENSE POLICY IN THE NEW ERA FROM A THREAT PERSPECTIVE USING ANALYTICAL NETWORK PROCESS

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ABSTRACT

The international world has undergone major changes along with the development of globalization. These changes include economic aspects, information that is increasingly accessible to the public, and growing cultural diversification. In addition, it also affects the national defense system. It causes a country to be able to make a policy to protect the national defense, such as the United States and China. The theoretical review used in this paper is the concept of national defense. The method used is qualitative by collecting information through a literature study. The result of this paper is that China has issued a defense white paper containing China's defense policies in a new era where China is carrying out a defensive defense strategy. China's defense policy is made to deter threats from outside and from within the country. China, which has become a major power in the world, has forced China to be able to compete with the United States in terms of state defense and security, so it is necessary to have a defense development policy that can be pursued through international cooperation as one way that can be taken.

Keywords: *Defensive; Globalization; National Defense; International Cooperation, Analytical Network Process (ANP).*

1. INTRODUCTION

Global politics has experienced significant changes in the last hundred years as globalization evolves. Information becomes increasingly accessible, mutualistic cooperation on economy, peace, and development have established as well as growing cultural diversification. Nonetheless, there are prominent destabilizing factors for international security. It accelerates the realignment of international forces where market forces and developing countries continue to grow so that the configuration of strategic forces becomes more balanced. The achievement of peace, stability, and development is a universal aspiration of the international community with the emphasis on peace dominating the elements of war. But on the other hand, the system of international security and order is disrupted by the emergence of hegemonies, power politics, unilateralism, and ongoing regional conflicts. As a result, international strategic competition is on the rise [3].

The rapid development of globalization also encourages the transformation of values carried out by political actors. High-politics issues

reemerge along with low-politics issues. In the high political aspect, it can be reviewed on military strength and new operational concepts. Globalization not only produces new instruments of war but also requires military practitioners to think about new advantages and threats [9].

Military technology superiority defines a nation's capability once it encounters an opposing force. Thus, it becomes a necessity for a country to increase the superiority of its military technology as well as hamper the development of military technology in other countries. In the era of globalization, countries in the world are busy with the competition carried out by state actors in maximizing military power in the form of increasing military budgets from each country [8].

The United States as a superpower, has configured its national security and defense strategy and adopted a unilateral policy. It provoked and intensified competition among the superpowers to increase their defense budgets to encourage an increase in the country's defense capacity to be less dependent on its security [12].

On the other hand, the new superpower, China, also considers that global and regional security issues are increasing where extremism

and terrorism continue to grow. In addition, non-traditional security threats involving cyberspace, biosecurity, and piracy are more prominent. So that China also increases its military budget to strengthen its military power so that it can protect its country's defense and security [14].

2. MATERIALS AND METHODS

2.1. The Methods

This study uses qualitative research methods. Qualitative research is conducted through the search for an answer by examining various social settings and groups as well as individuals in a social setting. In this case, qualitative research is used to understand the environment under study through symbols, rituals, social structures, social roles, and so on. According to [6] qualitative techniques here allow researchers to share in the understandings and perceptions of others and explore how people construct and give meaning to everyday life.

The data obtained comes from library materials which include books, articles, journals, and research results in digital form. In addition, using a literature review with a descriptive approach from previous research sources and other secondary data. These libraries come from annual reports as well as studies conducted by government and non-government agencies, online news, and previous research relevant to issues related to China's defense policy and response to the United States.

2.2. The Concept of National Defense

The concept of national defense is a dynamic concept that can grow and develop along with the development of the world. Changes in the international strategic environment and the development of threats affect the development of the national defense. Traditionally, the concept of state defense is a form of effort to protect the national interest. It consists of defending sovereignty, territorial integrity, and people's safety from all forms of threats and disturbances [13].

It is undeniable that the concept of defense is closely related to national security. The concept of defense can be seen as a concept like the concept of national security. [7] said defense is the same as security. Therefore, every anger to security from within is always accompanied by a threat of defense from the outside. External defense and internal security have become one in the sense of national security.

From the definitions, we conclude that national defense is a country's ability to defend and protect its national interests with or without intervention from outside parties to maintain the existence and welfare of its people. In the Indonesian defense system, there are five main elements to build and maintain to build defense system [5].

First, the political system directs the realization of a country's ideology since the ideology is the principle of the life of the nation and society. Ideology and values are built in the political environment as a unifying tool for the nation to ensure integrity, unity, and integrity [2]. Second, the economic system, and national defense need to be supported by the continuity of strong economic strength to prepare a strong defense system. The economic system must be built with a strong, independent, and highly competitive structure so that it can become a strong pillar of national defense [1]. Third, the social and cultural system, a country gets stronger if it has a competitive, productive, and quality society. Social and cultural systems must shape the character of quality human resources. Society is fundamental to national defense because it is the people who will build the foundation of defense in the political, economic, technological, or defense systems themselves. Fourth, the technology system, and the development of defense systems in the world are inseparable from technological developments. The state needs to play an active role in spurring the growth of the national industry that can increase domestic independence. One of the industrial products is the development of an independent and advanced defense industry [4]. Fifth, is the defense system, building the defense system is an effort to maintain and defend national independence and sovereignty, and territorial integrity.

2.3. The Analytical Network Process

Analytical Network Process (ANP) is a method that produces a framework for solving decision-making problems without involving assumptions related to independence between higher and weaker levels of elements and the independence of elements in one level. ANP also used the method of pairwise comparisons as in AHP. This pairwise comparison process uses a number/scale that reflects the level of importance/preference of a decision element with other decision elements at the same hierarchical level [10]. This helps decision-makers in comparing each of the decision elements because,

in each pairwise comparison, they only concentrate on two of them.

Table 1. Paired Comparison Scale

Interest Level	Definition
1	Both elements are equally important
3	One element is slightly more important than the other elements.
5	One element is actually more important than the other elements.
7	One element is clearly more important than the other elements.
9	One element is more important than any other element.
2, 4, 6, 8	The mean value between 2 adjacent assessments.

Overall ANP is a better decision-making tool than AHP, but ANP requires more work to capture facts and interactions. So for decisions that are simple in nature and must be done quickly, the extra work to capture the facts and interactions complicates their use.

a. Feedback Network

This feedback structure does not have a straight form from top to bottom as in a hierarchy

but rather resembles a network with cycles connecting the components in it to the components themselves. This structure also has sources and sinks. The source node is the origin of an influence path and never the destination of that path. The sink node is the opposite of the source node, which is the destination of the influence path and will never be the source of the existing path [11].

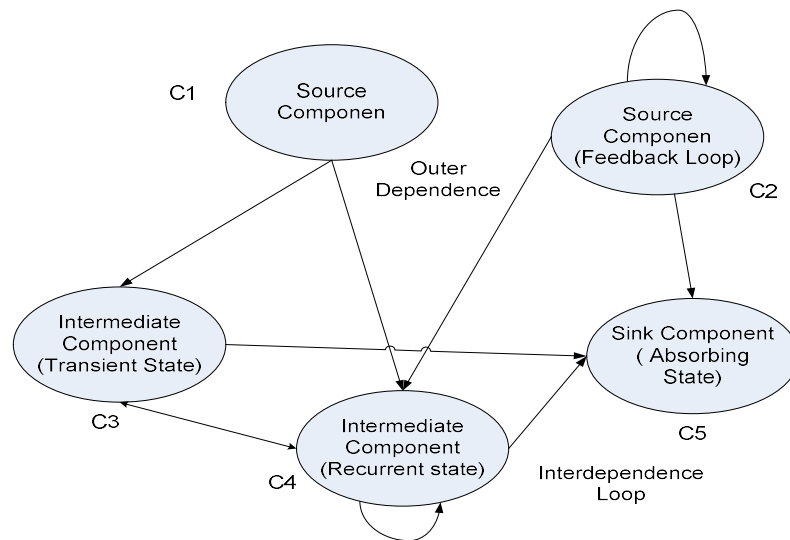


Figure 1. The Structure of the Feedback Network [11]

The components in the node above are a set of criteria and alternatives. Components, where there are no arrows entering the node are called source components such as C₁ and C₂. Components where there are no arrows coming out of the node are called sink components such as C₅. Components, where there are arrows going in and out of the node are called transient components such as C₃ and C₄. In addition, C₃ and C₄ form a cycle between the two components because the two components give feedback to each other. C₂ and C₄ have loops connecting those components to themselves. The loop is also

known as interdependent while the other connections between components are then called interdependent.

The decision network component is denoted by C_h, where h = 1, 2, ..., m, and it is assumed that the component has n_h elements denoted by e_{h1}, e_{h2}, ..., e_{h n_h}. The effect of a given set of elements in a component on each element in the system is symbolized by the priority vector resulting from pairwise comparisons in a general way in AHP. From these priority vectors, a matrix can be formed that reflects the flow of influence of a component

element both with the element itself and with other elements.

b. Priority in Supermatrix

To produce the priority limit of the supermatrix, the supermatrix must be converted into a matrix where each column has a uniform number. A supermatrix that has the same number of values for each column is called a stochastic matrix. The priority of an element in a component is an indicator of the priority of that component in the overall component arrangement. For this reason, it is necessary to compare these components according to the influence of each component in the supermatrix. Each comparison Produces a priority vector from the influence of all the components on the left side of the supermatrix on every component that is at the top of the super matrix. This is done for each component. The resulting vector is used as a matrix block weighting in the column that is in a component. The first input is multiplied by all the elements in the first block of the column, the second input is multiplied by the elements in the second block, and so on. The result of this process is known as a weighted supermatrix which is stochastic. This stochastic matrix can be used to produce the desired priority by turning it into a limit matrix. The supermatrix needs to be asserted to capture the transmission of influences in every possible path from a supermatrix. The input value in the weighted supermatrix describes the influence of an element on other elements, but an element can affect other elements indirectly. All effects considered indirectly are obtained by squaring the matrix many times, $W^k, k=1,2,\dots,n$.

3. RESULT AND DISCUSSION

Responding to global dynamics where interests and security are intertwined that humans as a world community will share the future. China views its government as being at a critical stage in completing the development of a prosperous society in all fields and states that China has started a new journey to build a modern socialist

state as a whole (Socialism characterized by the Chinese entering a new era). In 2019, China issued a China's National Defense in the New Era policy. It outlines a defensive defense policy explaining the practice, goals, and importance of China's efforts to build a national defense fortified by a strong military and the intention to help the international community better understand China's national defense.

The first part of the White Paper describes the international security situation in that the world is undergoing major changes that have not been seen in the last century. In line with the globalization of the economy, the information society, cultural diversification that is developing more and more multi-polar, peace, development, and mutually beneficial cooperation remain trends that do not change with time. Nevertheless, several destabilizing factors and uncertainties are quite prominent in international security issues, so the world is not yet a comfortable place.

3.1. The Analytical Network Process Model

This paper will analyze the defense policy taken by China in the face of current global conditions. To analyze the defense policy taken by China using the Analytical Network Process. The first step is taken in determine the goals, and alternative policies taken by China, and the criteria of each alternative. Determination of criteria and alternatives based on NDS analysis that identifies long-term strategic competition with China and Russia as a top priority by implementing four strategic ways. First, building a powerful force to gain military advantage. Second, strengthen allies and partners to create stronger networks that can advance common interests. Third, reforming the DoD to achieve performance and affordability. Last, expand the competitive space to create a US advantage and pose a dilemma for competitors. Here is a table of criteria and alternatives regarding China's defense policy.

Table 2. Criteria and Alternative China Defense Policy

No	Criteria	Alternative
1	Prevent Aggression	Nuclear Modernization
2	Maintaining Security and Social Stability	Increasing Conventional military power
3	Refuse Taiwan's Independence	Support the Country's Sustainable Development
4	Protect Foreign Policy Interests	Cyber and Satellite Defense Enhancements

After determining the criteria and alternatives as in the table above, it has four criteria and four alternative defense policies. By using alternatives and criteria, the next step is to build a network model of relationships between criteria and alternatives. The relationship that is

built is not like the Analytical Hierarchy Process model which is only from top to bottom. In this ANP model, it can influence each other and be influenced so that the model obtained later will be more complex. The model created can be seen as shown in the network figure below.

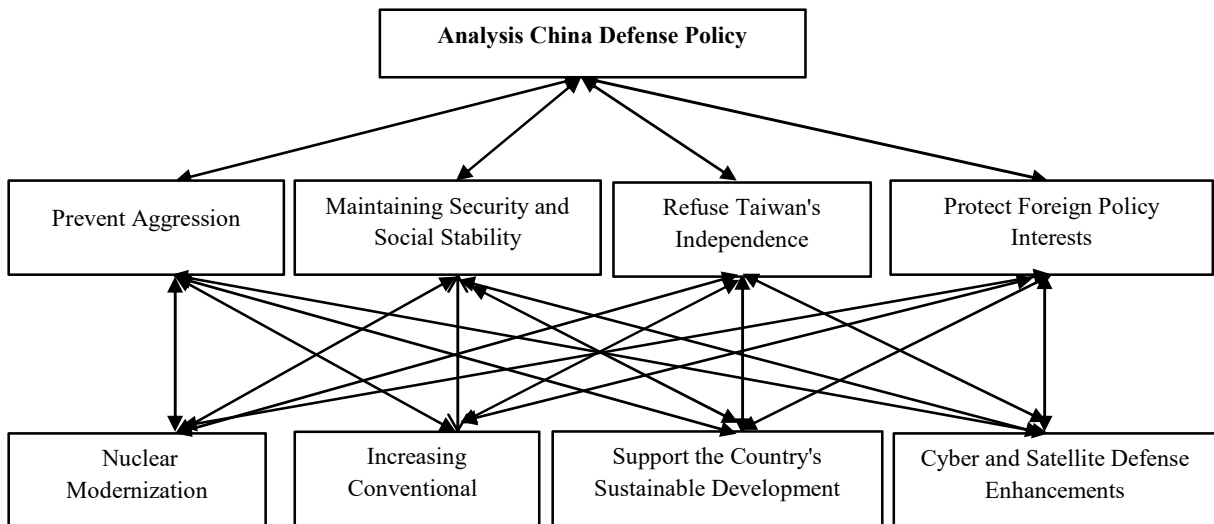


Figure 2. ANP Model Structure

In the model figure above, the relationship between criteria and alternatives is interrelated and influences each other. Nuclear modernization will be influenced and affect the four criteria. The same thing happens to other alternatives that will affect and be influenced by existing criteria.

3.2. Processing Data with Super Decision

Super Decision is a software application used to help multi-criteria decision-making. The app allows users to generate and account for a variety of different criteria and evaluate available options based on those criteria. The first step taken in processing data in super decisions is to form network relationships as below:

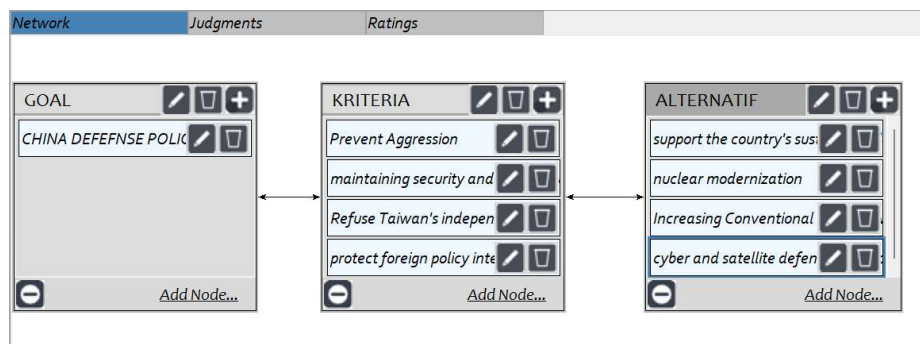


Figure 3. Network Structure Model

After creating a network model as above, then make a pairwise comparison. Pairwise is

done by comparing between criteria, there are six comparisons as can be seen below.



Figure 4. Pairwise and Weight Criteria

The Figure above is a *pairwise comparison* of all criteria against goals. Comparison of criteria between maintaining security and social stability with preventing aggression, maintaining security and social stability with Refuse Taiwan's independence, maintaining security and social stability with protecting foreign policy interests, preventing aggression with protecting foreign policy interests, preventing aggression with refusing Taiwan's independence, protect foreign policy interests with Refuse Taiwan's independence.

The most important weight in this election is prevented aggression with a value of 0.418, then the criteria maintaining security and social stability with a weight of 0.271, next

criteria Refuse Taiwan's independence with a weight of 0.191 the last is the criteria protect foreign policy interests with a weight of 0.121. The questionnaire data is entered into the super decision software as a paired comparison matrix and the inconsistency ratio value will automatically appear. If the inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0266, smaller than the maximum value of inconsistency, the results of the answers in the pairwise comparison above are consistent.

Pairwise comparison of cyber and satellite defense by comparing alternatives to those owned. There are 6 comparisons as can be seen in the Figure below.

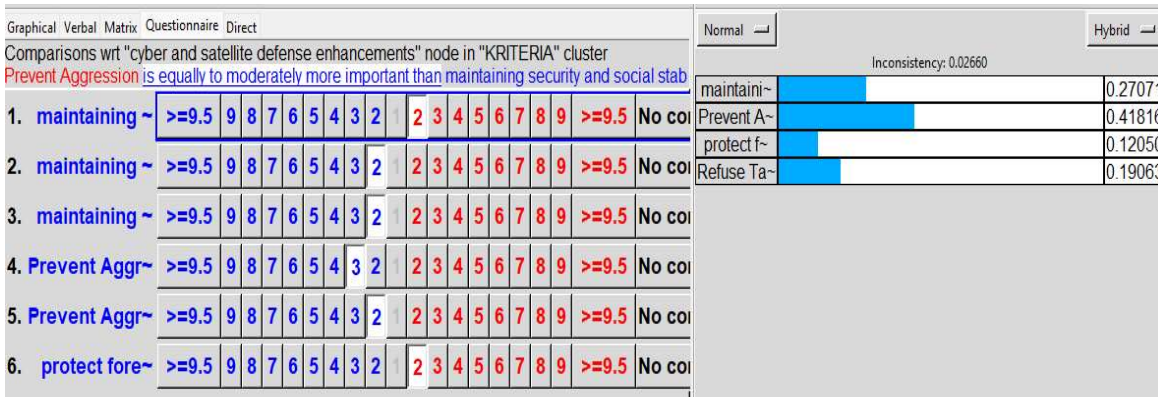


Figure 5. Pairwise and Weight Cyber and Satellite Defense

The most important weight in this pairwise is preventing aggression with a value of 0.418, then the criteria maintaining security and social stability with a weight of 0.271, next criteria Refuse Taiwan's independence with a weight of 0.191 the last is the criteria protect foreign policy interests with a weight of 0.120. The questionnaire data is entered into the super

decision software as a paired comparison matrix and the inconsistency ratio value will automatically appear. If the inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0266, smaller than the maximum value of inconsistency, the results of the answers in the pairwise comparison above are consistent.

Pairwise comparison of nuclear modernization by comparing alternatives to those

owned. There are 6 comparisons as can be seen in the Figure below.

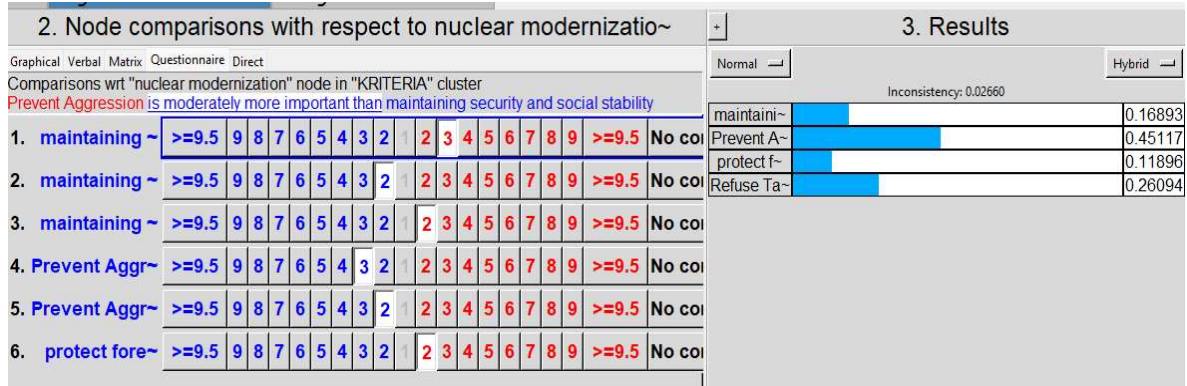


Figure 6. Pairwise and Weight Nuclear Modernization

The most important weight in this pairwise is preventing aggression with a value of 0.451, then the criteria Refuse Taiwan's independence with a weight of 0.261, next criteria maintaining security and social stability with a weight of 0.169 the last is the criteria protect foreign policy interests with a weight of 0.119. The questionnaire data is entered into the super decision software as a paired comparison matrix and the inconsistency ratio value will

automatically appear. If the inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0266, smaller than the maximum value of inconsistency, the results of the answers in the pairwise comparison above are consistent.

Pairwise comparison of increasing conventional military power by comparing alternatives to those owned. There are 6 comparisons as can be seen in the Figure below.

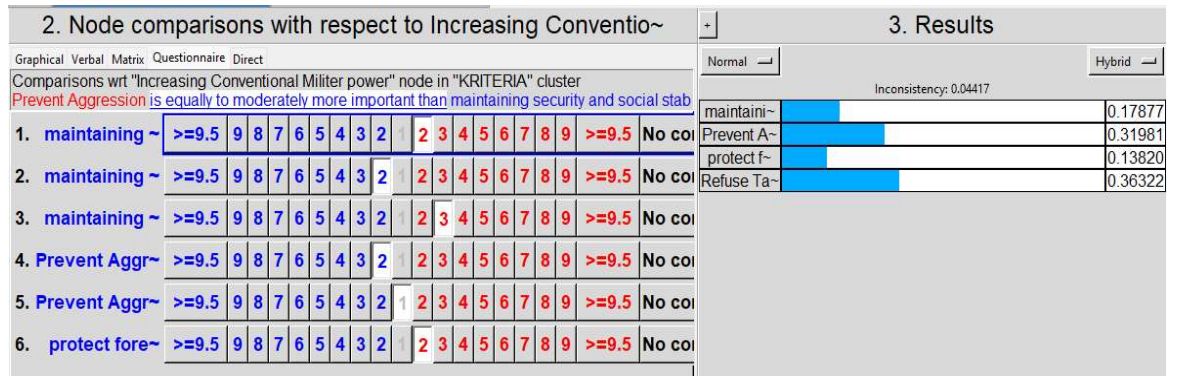


Figure 7. Pairwise and Weight Increasing Conventional Military

The most important weight in this pairwise is Refuse Taiwan's independence with a value of 0.363, then criteria prevent aggression with a weight of 0.319, next criteria maintaining security and social stability with a weight of 0.179 the last is the criteria protect foreign policy interests with a weight of 0.138. The questionnaire data is entered into the super decision software as a paired comparison matrix and the inconsistency ratio value will

automatically appear. If the inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0442, smaller than the maximum value of inconsistency, so the results of the answers in the pairwise comparison above are consistent.

Pairwise comparison of Supporting the country's sustainable development power by comparing alternatives to those owned. There are 6 comparisons as can be seen in the Figure below.

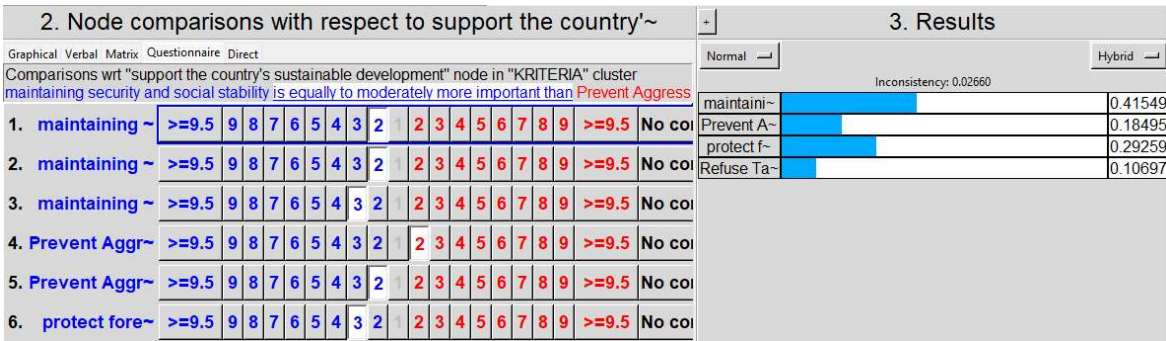


Figure 8. Pairwise and Weight Support the Country's Sustainable Development

The most important weight in this pairwise is maintaining security and social stability with a value of 0.415, then protecting foreign policy interests with a weight of 0.293 next criteria is preventing aggression with a weight of 0.185 the last is the criteria Refuse Taiwan's independence with a weight of 0.107. The questionnaire data is entered into the super decision software as a paired comparison matrix and the inconsistency ratio value will

automatically appear. If the inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0266, smaller than the maximum value of inconsistency, the results of the answers in the pairwise comparison above are consistent.

Pairwise comparison of maintaining security and social stability power by comparing alternatives to those owned. There are 6 comparisons as can be seen in the Figure below.

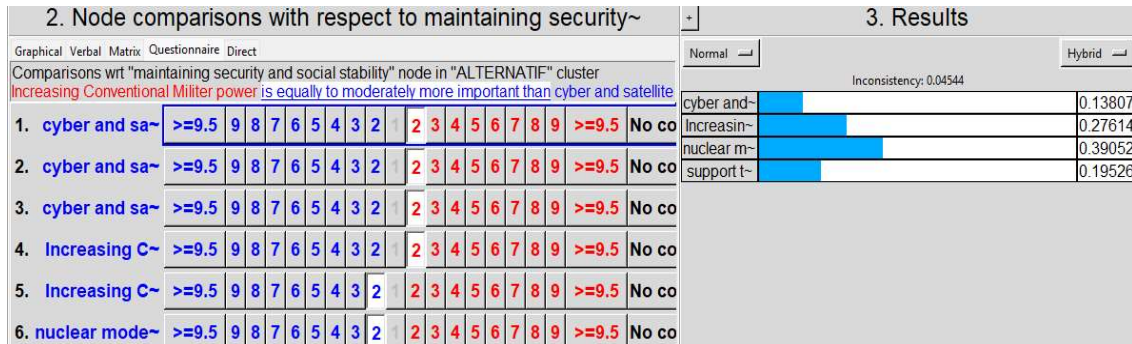


Figure 9. Pairwise and Weight Maintaining Security and Social Stability

The most important weight in this pairwise is nuclear modernization with a value of 0.391, then increasing conventional military with a weight of 0.276 next criterion is support the country's sustainable development with a weight of 0.185 the last is the cyber and satellite defense enhancements with a weight of 0.107. The questionnaire data is entered into the super decision software in the form of a paired comparison matrix and the inconsistency ratio value will automatically appear. If the

inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0454, smaller than the maximum value of inconsistency, the results of the answers in the pairwise comparison above are consistent.

Pairwise comparison of prevent aggression power by comparing alternatives to those owned. There are 6 comparisons as can be seen in the Figure below.

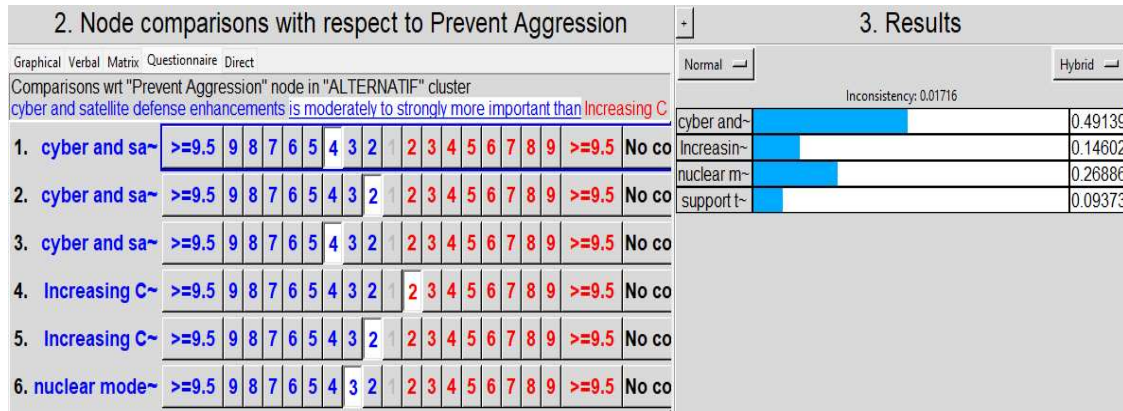


Figure 10. Pairwise and Weight prevent aggression

The most important weight in this pairwise is cyber and satellite defense enhancements with a value of 0.491, then nuclear modernization with a weight of 0.269 next criterion is increasing conventional military with a weight of 0.146 the last is supporting the country's sustainable development with a weight of 0.094. The questionnaire data is entered into the super decision software in the form of a paired comparison matrix and the inconsistency ratio value will automatically appear. If the

inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0172, smaller than the maximum value of inconsistency, the results of the answers in the pairwise comparison above are consistent.

Pairwise comparison of protecting foreign policy interest power by comparing alternatives to those owned. There are 6 comparisons as can be seen in the Figure below.

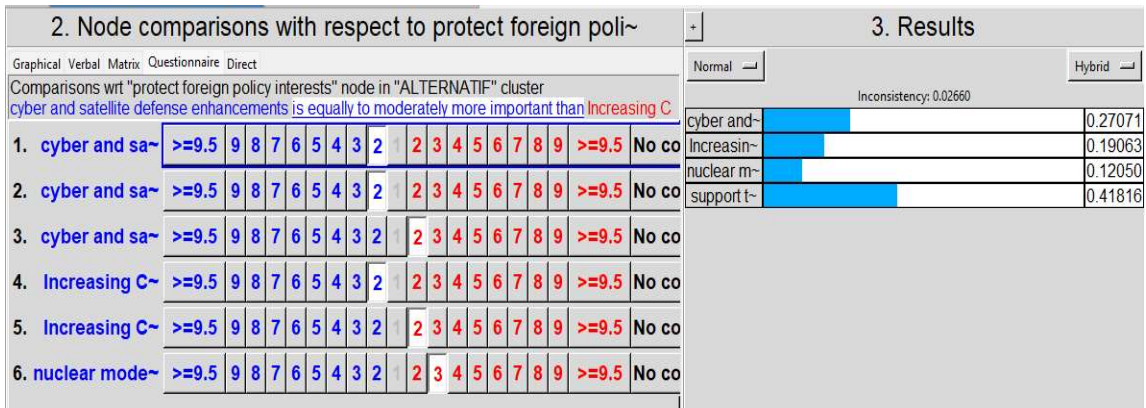


Figure 11. Pairwise and Weight Protect Foreign Policy Interest

The most important weight in this pairwise is support the country's sustainable development with a value of 0.418, then cyber and satellite defense enhancements with a weight of 0.271 next criterion are increasing conventional military with a weight of 0.191 the last is nuclear modernization with a weight of 0.121. The questionnaire data is entered into the super decision software in the form of a paired comparison matrix and the inconsistency ratio value will automatically appear. If the

inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0266, smaller than the maximum value of inconsistency, the results of the answers in the pairwise comparison above are consistent.

Pairwise comparison of refusing Taiwan's independence by comparing alternatives to those owned. There are 6 comparisons as can be seen in the Figure below.

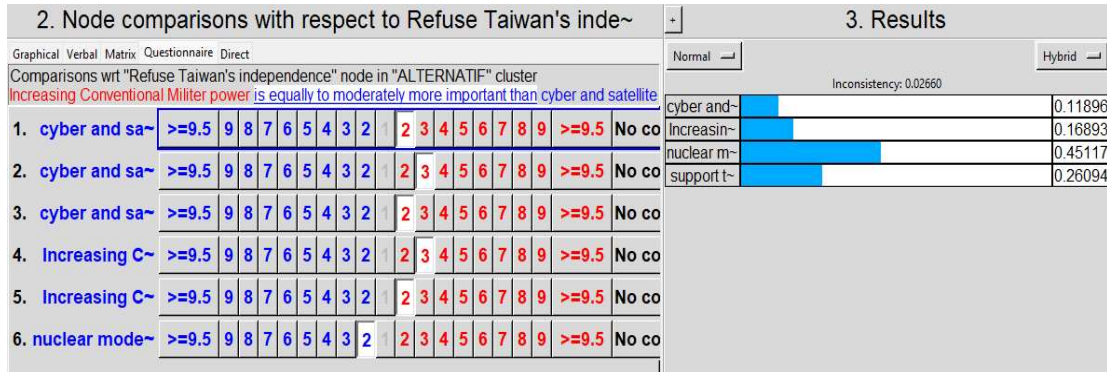


Figure 12. Pairwise and Weight Refuse Taiwan's Independence

The most important weight in this pairwise is nuclear modernization with a value of 0.451, then support the country's sustainable development with a weight of 0.261 next criteria is increasing conventional military with a weight of 0.169 the last is cyber and satellite defense enhancements with a weight of 0.119. The questionnaire data is entered into the super decision software as a paired comparison matrix and the inconsistency ratio value will

automatically appear. If the inconsistency ratio value is greater than 10% (0.10), re-data must be retrieved. With an inconsistency value of 0.0266, smaller than the maximum value of inconsistency, the results of the answers in the pairwise comparison above are consistent.

From the results of the calculation above, the results of cumulative weights on each alternative are obtained. The total weight can be seen in the Figure below.

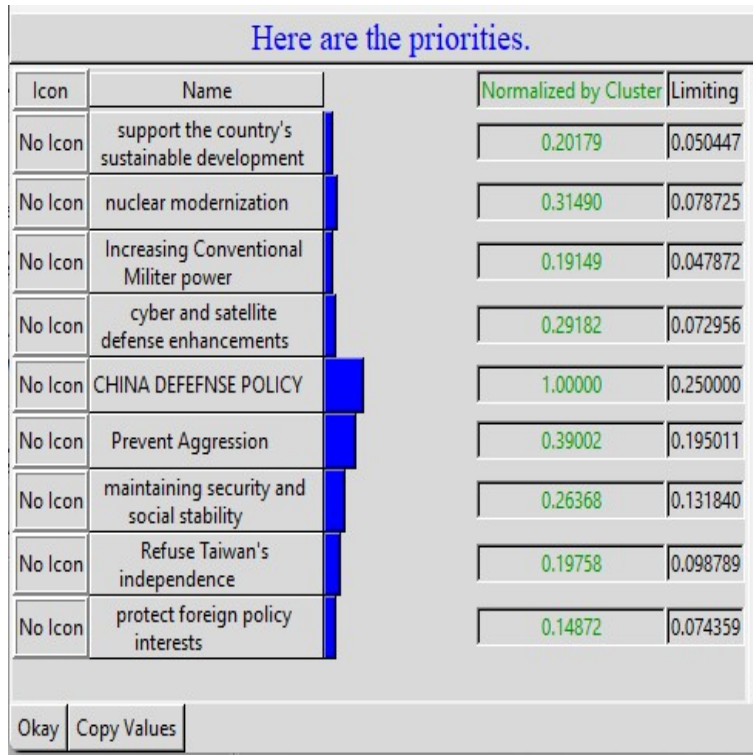


Figure 13. Final Priority ANP Model

From the calculation results in the previous sub-chapter, the following cumulative results are obtained the highest weight is nuclear modernization with a score of 0.315. The defense policy of the nuclear modernization program is intended to support two objectives. First, maintaining anticipatory capabilities against nuclear and conventional weapons threats from major powers, like the US which always interferes with problems that are happening with China, for example, in the conflict with Taiwan US helps by supplying weapons and support to Taiwan. The Second, building tactical nuclear weapons capabilities for use in limited conflict situations. In second place is cyber and satellite defense with a score of 0,291 Major powers are adjusting their security and military strategies and their military organizational structures by developing Cyber security and satellite to support their defense. With cyber and satellite defenses, China can

4. CONCLUSION

Based on the calculations above, the policy that will be taken by China is nuclear modernization with a weight of 0.315. The strategy was selected because China has a strong rival, the US, which needs nuclear development to increase its deterrence against the US. Competition between China and the US occurs in trade, economy, military, and even politics. The US is helping Taiwan to become independent, but it will be a conflict between the two major countries. With nuclear modernization, China will have bargaining power against the US in the event of chaos like the one between Russia and Ukraine. No country dares to interfere in Russia's war because Russia has the nukes to threaten the countries of the world. This strategy will be carried out by China to have bargaining power against the world in the event of a major conflict.

In second place is cyber and satellite defense with a score of 0,291. Most all developed countries are adjusting their security and military strategies and their military organizational structures by developing Cyber security and satellite to support their defense because, with cyber and satellite defenses, China can secure its economy and secure its soft defenses. By studying the war in Ukraine, the first defense attacked by Russia is the cyber defense of the opposing country, so strengthening cyber defense will increase the deterrence effect against enemies who threaten China.

secure its economy and secure its soft defenses. By studying the war in Ukraine, the first defense attacked by Russia is the cyber defense of the opposing country, so strengthening cyber defense will increase the deterrence effect against enemies who threaten China. In third place is occupied by support country development with a score of 0.201. This strategy is to support the development of the country by developing its military power. So that the development of the country will be followed by the development of the military. In last place is increasing conventional military power with a score of 0.191. The development of China's conventional military power is developing very rapidly, not inferior to their nuclear power. In dealing with Taiwan using conventional military force, in the form of weapons and cannons, plus aircraft and warships. Because their conventional forces are growing today, China's focus is on developing nuclear and cyber security.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

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