

National Security Systems on The Threat Perception Index

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Abstract

This study focused on five variables threat perception, in the strategic decision making process. This study uses a quantitative approach to threat perception index and analytic hierarchy process method. Threat perception index variables: changes in global power mapping, strategic environment with high ambiguous, the political system in the country, domestic and violations of socio-cultural norms. The results of this research: (1) variable political system in the country, domestic and social culture of critical signals violation of norms derived from the analytic hierarchy process can be used as the basis for establishing the national security system; (2) The threat perception index in international relations.

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Penelitian ini fokus pada lima persepsi variabel ancaman, dalam proses pengambilan keputusan strategis. Penelitian ini menggunakan pendekatan kuantitatif dengan indeks persepsi ancaman dan metode proses hirarki analitik. Variabel indeks persepsi ancaman: perubahan pemetaan kekuatan global, lingkungan strategis dengan ambigu tinggi, sistem politik dalam negeri, sosial budaya domestik dan pelanggaran norma. Hasil penelitian ini: (1) variabel sistem politik dalam negeri, sosial budaya domestik dan sinyal kritis pelanggaran norma yang diperoleh dari proses hirarki analisis dapat dijadikan dasar untuk menetapkan sistem keamanan nasional; (2) indeks persepsi ancaman dalam hubungan internasional.

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Introduction

The importance of security concept studies (SS) as a high concept of political debate about the nature of government central government were established in different countries (Collins, 2007). The concept of security is used to discuss the threat perception which consists of: (1) threats to national security in the form of drastic changes that resulted in decreased levels of quality of human life in the country; and significant changes in the possibility of choice of citizens in response to the state policy (Ullman, 1983), (2) their (absent) threat, subjective so not to cause a scary feeling.

Concept of Security Studies considered to theory or realism - Neorealist which introduced the concept of balance of power, which is how the state can exist with national security purposes (Waltz, 1979). Essential element in the balance of power consisting of: 1) concept anarchy, violence is inter and intra-state will continue to grow if the power (power) the government is absent and cannot overcome violence; 2) The core

elements of power, which is the state of the people, the population, the mastery of modern technology; and 3) units of unity among state officials, heads of state, leaders of political parties, interest groups and the broader community are very useful when making strategic interaction.

Waltz (1988) stated clearly different characteristics between the bipolar world's power centers: 1) on a bipolar: a lot depends on you (state), danger or threat is clear or obvious, and can be sure of who the "enemy" faced; While 2) centers: each group (country) interdependence, danger, or threat becomes dispersed, and respond to danger or threat often experience uncertainty in the decision to acts. Difference implications is the source of bipolar danger may result from excessive reactions, while the sources posed by the effect of miscalculations.

National security cannot be separated from the issue of security dilemma at two strategic levels: (1) the most fundamental level about how to interpret the motives, intentions, capabilities of certain countries that are building their national security

capabilities; and (2) the level of elaboration measures that need to be done (physical and non-physical) rational (reasonable, clear) on the construction of neighboring countries power (Booth and Wheeler, 2008).

Jervis (1976) distinguished the security dilemma in national concept of defense in two variables: variables that aims to keep the balance of national defense (offense-defense balance); and variables that more emphasis on the development of national defense. In the context of strategic interaction potential vulnerabilities in inter-state relations in the form of misperceptions, miscalculations, misleading, and misrepresentation (Stein, 2013).

Threat perception model initiated by Stein (2013) was developed based on the assumption of perceived threat a leader's argument in a receiving threat and declared war against other countries, due to incomplete information and thus potentially creating conditions of uncertainty. The concept based on misperception of strategic concept intelligence which consists of two

formats: capabilities and intentions (Levy, 1983). Explanatory theory threat perception emphasizes that the perception of the threat is a fundamental to be able to understand, learn and identify and motivate to act individually (Stein, 2013).

Analytic Hierarchy Process (AHP) by Saaty (2008) is a theory of measurement through pairwise comparison and rely on expert judgment to get the scale of absolute priority. Analysis in the calculation of probability based decision-making techniques that involve complex multi-criteria to rank the alternatives have some decisions based on multiple criteria (Saaty, 2008).

Cheng and Mon (1994) explains that the AHP is very useful to analyze the decisions on problem solving through the criteria, the results of research Saaty AHP model has been successfully completed evaluation and selection system in Taiwan weapons issues. Chan (2003) explained that AHP has become a popular approach that attempts to measure human judgment to an opinion by using statistical methods capable of

quantitatively integrate business decisions. AHP is also widely used for subjective assessment at senior management level (Min, 1993, Krause and Ghodsypour Ellram 1997 and O'Brien, 1998, Humphreys et al., 1998, Verman and Pullman 1998), specialist fields (Mandal and Deshmukh, 1994, Rebstock and burghers in 1996 Barbarosoglu and Tazgac 1997, Babic and Plazibat 1998, Cheng and Li, 2001, Humphreys et al., 2001) and the project team (Ragatz et al., 1997, Boer et al. 1998).

AHP is a method of group decision making by using the geometric, which based on the individual assessment to gives the advantage examine and reduce inconsistencies assessment expert from bias in the decision-making process (Aminbakash, Gunduz, Sonmez, 2013). AHP is used to develop a system of decision-making with level risk factors (Padma and Balasubramanie 2009), comparing the risk factors associated with human error (Zhang, Zhan and Tan, 2009) and the risk of construction sites by using expert judgment and AHP (Kim, Lee, Park and Lee, 2010), decomposition

structure, comparative assessment and hierarchical composition (or synthesis) are the principal priorities in AHP (Aminbakash, 2013).

Research Methods

This study uses a quantitative method with arguments. AHP model used in the test of confidence factor research results by objectively from all major input based on the opinion perception of an expert (Siregar, 2013), expected results of measurements can describe the decision to approach validity with CR criteria (consistency ratio) that expected less than or equal to 10%.

To analyzed the hypothesis by using statistical tests (Siregar, 2013; and Sugiyono, 2011), in calculating accurately using Expert Choice Software Version 11. Here are five variable perception of threat that will be used in this study: the changes in the map of power (military) that are globally systemic (V1); (2) The strategic environment is ambiguous, associated with the security dilemma (V2); (3) The political system of domestic and interes state institutions (V3); (4) Socio-cultural domestic and

civil society (V4); and (5) The policies are outside the norm’s provisions and critical signal (V5). While terminology of threat is built on four core elements: (1) Verbal’s threat (A1); (2) Non-verbal’s threat (A2); (3) The threat deterrence (A3); and (4) The threat coercive (A4). The objective of Perception following variables with the following elements: (1) direct military capabilities that can be measured; (2) military capabilities that are not directly measurable; (3) The intention is utopian; and (4) which is the basic intention.

Results and Discussion

The results showed overall inconsistency has fulfilled the criteria CR (Consistency Ratio) ≤ 0.1 in accordance with the theory of AHP,

and the calculation result of performance varied selection of alternative rankings based on eight types of reviews.

In the TreeView overall indicators that show the measurement results ExpertChoice criteria for CR (Consistency Ratio) ≤ 0.1 in two categories: the first category, the attribute “L” to “Local” is intended as an inconsistency ratio attributes to the eight elements on Level 2 of the hierarchy level 1 on it (perception and threat), whereas the second category, the attribute “G” to “Global” is intended as an inconsistency ratio on recapitulation result the four elements of perception and four elements of threats to level 2 of the hierarchy level 1.

Table 1. Results Achievements Alternative Variable according to the description Treeview AHP

Changes in global power map	.252
Strategic environment is ambiguous	.173
Interest domestic political system and state institutions	.187
Domestic social, culture and civil society	.115
State policies outside provisions norm and critical signal	.273

The next summary of products is the result of overall synthesis that shows the output recapitulation result alternate input selection is based on the charge Level 3 respectively. Based on

the processed overall inconsistency of .03 means that hardly any inconsistency in the decision-making process accumulative, so it has been able to meet the criteria / requirements

AHP theory that $CR \leq 0.1$, then fine synthesis of this summary declared applicable. According to the results of this process, it also produced a statement in the fifth overall selection

of in the alternative ranks priority. Based on the above proof, then select the threat perception index can be answered in the arrangement of the composition, as follows:

Table 2. Threat Perception Index

Ranking	Inconsistency	Threat Perception Index
I	0,273	State policies outside provisions norm and critical signal
II	0,252	Changes in global power map
III	0,187	Interest domestic political system and state institutions
IV	0,173	Strategic environment is ambiguous
V	0,115	Domestic social, culture and civil society

The compositional threat perception index is a measurement result which is based on current research, and may change the composition of the composition for determination: perception factor and expert factors that apply to state actors

or non-state actors. The tendency of the relation between alternative variables with a review of objective variables, straightforwardly be described by facilitating sensitivity performance that has been provided by Expert Choice.

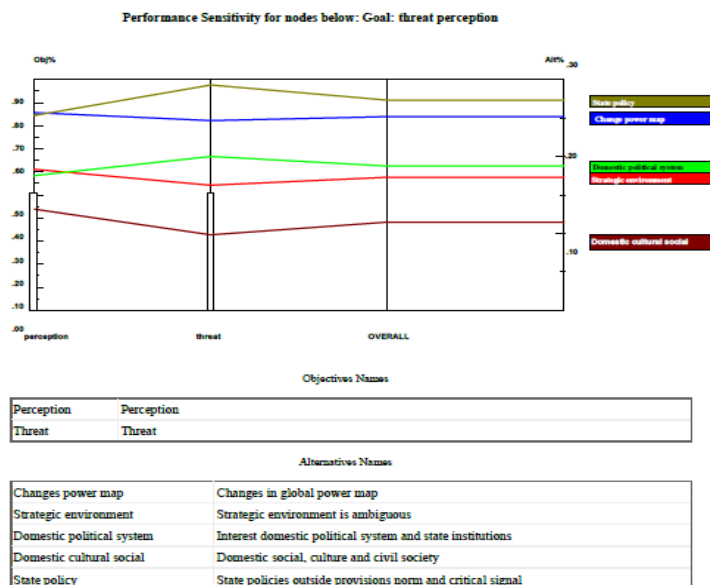


Figure 1. Sensitivity performance

In the first vertical axis the representation of perception axis, and the second being the axis of the threat, and the last is the axis overall. When

judging thoroughly, then each of the vertical axis will be “on” the dynamic lines of the five variables alternative choices marked with certain colors.

Table 2 Composition Ranking Fifth Alternative Variable Options Based Perception Review Criteria

	Exogenous factors			Endogenous factors		<i>Rechek (Total):</i>
	V1	V2	V3	V4	V5	
P1	I	V	III	IV	II	5
P2	III	V	IV	II	I	5
P3	III	II	IV	V	I	5
P4	I	III	IV	V	II	5
Subtotal ‘P’	4	4	4	4	4	20
Ranking I	2	-	-	-	2	4
Ranking II	-	1	-	1	2	4
Ranking III	2	1	1	-	-	4
Ranking IV	-	-	3	2	-	4
Ranking V	-	2	-	2	-	4
Subtotal ‘R’	4	4	4	4	4	20
P1	: Capabilities (military) directly measure		V1	: Map changes force (military) global		
P2	: Capabilities (military) do not directly measurable		V2	: Strategic environment is ambiguous		
P3	: Utopian intentions		V3	: Interest domestic political system and state institutio		
P4	: Basic intention		V4	: Domestic social, culture and civil society		
I	: First rank symbol		V5	: ‘The violation of norms’ and the critical signal		
II	: Second rank symbol		Subtotal ‘P’	: Subtotal for Perception column		
III	: Third rank symbol		Subtotal ‘R’	: Subtotal for Ranking column		
IV	: Fourth rank symbol		V	: Fifth rank symbol		

Based on the reviews P1 (direct military capabilities that can be measured) and P4 (which is the basic intention) proved equally generate alternatives V1/rank 1 in V5/rank2. While a review P2 (the military

capabilities that are not directly measurable) or P3 (intentional utopian) proved equally generate alternatives V1/rank third in V5/rank 5.

Table 3 Composition Ranking Fifth Alternative Variable Options Based Threat Criteria Overview

	Exogenous factors		Endogenous factors			<i>Rechek (Total):</i>
	V1	V2	V3	V4	V5	
A1	III	V	II	IV	I	5
A2	III	IV	II	V	I	5
A3	I	III	II	V	IV	5
A4	I	IV	III	V	II	5
Subtotal ‘P’	4	4	4	4	4	20
Ranking I	2	-	-	-	2	4
Ranking II	-	-	3	-	1	4
Ranking III	2	1	1	-	-	4
Ranking IV	-	2	-	1	1	4

	Exogenous factors		Endogenous factors			<i>Rechek (Total):</i>
	V1	V2	V3	V4	V5	
Ranking V	-	1	-	3	-	4
Subtotal 'R'	4	4	4	4	4	20
A1	: Verbal treath		V1	: Map changes force (military) global		
A2	: Non-verbal treath		V2	: Strategic environment is ambiguous		
A3	: Deterrence threat		V3	: Interest domestic political system and state institutions		
A4	: Coercion treath		V4	: Domestic social, culture and civil society		
I	: First rank symbol		V5	: 'The violation of norms' and the critical signal		
II	: Second rank symbol		Subtotal 'P'	: Subtotal for Perception column		
III	: Third rank symbol		Subtotal 'R'	: Subtotal for Ranking column		
IV	: Fourth rank symbol		V	: Fifth rank symbol		

Based on the reviews A1 (verbal threats) and A2 (non-verbal threats) proved equally generate alternative choices V1/ranking third in V3/rank 2; Second, based on a review A3 (threat deterrence) only produce alternative V1/rank 1 in V3/rank 2; based on the A4 (the threat of coercion). While a review A4 (the threat of coercion) only produce alternative V1/rank 1 in V3/third ranking.

Other findings significant is the column (5), which is positioned V5 (the violation of norms and being critical signals), only review based on the A3 (threat deterrence) that does not produce a representation (zero), whereas for review A1, A2 and A4 to produce a representation of the V5 consecutive rank 1, rank 1 and rank 2, so the V5 has a weight value is the number 3 (three).

Table 4 Composition Ranking the Fifth Alternative Variable Options Based on the review criteria and Threat Perception

	Exogenous factors		Endogenous factors			<i>Rechek (Total):</i>
	V1	V2	V3	V4	V5	
P1	I	V	III	IV	II	5
P2	III	V	IV	II	I	5
P3	III	II	IV	V	I	5
P4	I	III	IV	V	II	5
A1	III	V	II	IV	I	5
A2	III	IV	II	V	I	5
A3	I	III	II	V	IV	5
A4	I	IV	III	V	II	5
Subtotal 'P'	8	8	8	8	8	40
Ranking I	4	-	-	-	4	8
Ranking II	-	1	3	1	3	8
Ranking III	4	2	2	-	-	8
Ranking IV	-	2	3	2	1	8
Ranking V	-	3	-	5	-	8
Subtotal 'R'	8	8	8	8	8	40

Judging from the position of V1 which is a component of exogenous factors, while V3 and V5 which is a component of endogenous factors, it is quite interesting that the perceived threat is certainly more dominant observe factor exogenous, through the approach of decision making with AHP model, the results of the testing yield performance sensitivity is precisely more dominant on endogenous factors which represented V3 and V5 compared to only one representation V1 of exogenous factors.

Value inconsistency ratio V5 which is reviewed by P1 (capability that can be directly measured) scored 0.235 on the second rank, while when viewed by P2 (abilities that are not directly measurable) scored 0,244 on the first rank. inconsistency in the ratio indicates that the intention element V5 in terms of P3 (intentional utopian)

scored 0.273 on the position of the first rank, while in terms of P4 (which is the basic intention) scored 0.251 on the second ranking position. With this data show that, in perceiving the V5 should consider the factors that utopia intention nor the basic (basic) in effect on a country.

V5 ranking positions in the utopian intentions puts V5 on the ratings I (first), while the intentional nature puts V5 base on the second rank (second). It is rational because the first rank in considering utopian intentions continuously consider V2 (strategic environmental ambiguous) which can provide signals or stimuli on the development of strength and military capabilities; while in the second rank always consider the V1 (change map global military power) that can provide signals or stimuli tendency to use military force and the designation of a country

Table 5 Relation Composition V5-V1-V3 Based Ranking of the Big Three of Performance Sensitivity

<i>Ranking result Performance Sensitivity</i>	F/ Endogenous	F/ Exogenous	F/ Endogenous
	Priority 1	Priority 2	Priority 3
Variabel (V) alternative options	V5	V1	V3
Ranking Result P1	II	I	III
P2	I	III	IV
P3	I	III	IV
P4	II	I	IV
A1	I	III	II
A2	I	III	II
A3	IV	I	II
A4	II	I	III

With the acquisition of data on the composition V5-V1-V3 based Big Three Ranking of Performance Sensitivity, resulting in an established relationship (steady) in the four categories of group relations. The first category produces a relation of ranking results of the review by P2 (abilities that are not directly measurable) and P3 (intentional utopian) produce compositions relation V5-V1-V3 with the rank ordering of I-III-IV; the content of the decision-making process can be analyzed.

The second category produces the relation of ranking results of the review by the A1 (verbal threats) to A2 (non-verbal threats) results in relation composition V5-V1-V3 with the rank ordering of I-III-II; the content of the decision-making process can be analyzed. While the third category resulted in a relation of ranking results of the review by P1 (the direct capability can be measured) to A4 (the threat of coercion) produce compositions relation V5-V1-V3 with the rank ordering of II-I-III; the content of the decision-making process can be analyzed. In the fourth

category produce the combination to the distribution of results of the review by P4 (which is the basic intention) with the rank ordering of II-I-IV, while based on A3 (threat deterrence) with the rank ordering of IV-I-II; the content of the decision-making process can be analyzed.

Based on the processed, obtained overall inconsistency .03 intended as almost inevitable inconsistencies in the decision-making process accumulative, so it has been able to meet the criteria / conditions AHP theory that CR (Consistency Ratio) ≤ 0.1 , then processed synthesis this summary is declared valid.

According to the results of this overall processed, also produced statements on the fifth ranking of alternative choices consist of V1 (global power map changes); V2 (strategic environment that is ambiguous); V3 (domestic political system and the interests of state institutions); V4 (social domestic culture and civil society); and V5 (state policies are outside the norms and critical signal conditions); with the rank order of priority alternative

options.

Having obtained the distribution of the processed data based on the comparison of each of the eight criteria, overall results overall inconsistency has met the criteria CR (Consistency Ratio) ≤ 0.1 in accordance with the theory of AHP. The results of the fifth overall calculation shows an overview of alternative variable in realizing the construction of the perceived threat. The application of knowledge relies on reasoning ability, cognition, and behavior of the actors in the decision making process, in particular the high state officials and political elite at the strategic level. Achieving consistency in overall ratio in accordance with the provisions required by the theory of AHP, value or weight consistency ratio ≤ 0.10 . When viewed from the position of V1 which is a component of exogenous factors, while V3 and V5 which is a component of endogenous factors, it is quite interesting that the perceived threat is certainly more dominant observe factor exogenous, through the approach of decision making with AHP model, from generate test results sensitivity

performance that was more dominant on endogenous factors which represented V3 and V5 compared to only one representation V1 of exogenous factors.

Achievement consistency ratio on alternative variables showed endogenous factors selected in superior performance, with the results of the testing yield sensitivity performance in the sequence:

- a. Variable 1: state policies are outside the norms and critical signal conditions;
- b. Variable 2: changes in the map of global power;
- c. Variable 3: domestic political system and the interests of state institutions;
- d. Variable 4: The strategic environment is ambiguous; and
- e. Variable 5: domestic social, cultural and civil society

In accordance processed overall ranking produced statements on the fifth alternatives consisting of V1 (global power map changes); V2 (strategic environment that is ambiguous); V3 (domestic political system and the interests of state

institutions); V4 (social culture of domestic and civil society); and V5 (state policies are outside the norms and critical signal conditions). The order of priority ranking of alternatives based on the findings that the policies of the state outside the norms and regulations and critical signal is the top ranking, while the domestic socio-cultural variables and society is ranked lowest.

The content of the decision-making process can be analyzed, but ambiguous, this is because when the compositions and the relation is interpreted as an assumption that is associated with a country feel confidence with P4 while the signal / stimuli A3 support countries and does not pose a security dilemma, then V1 favor of the state.

But, if it does not receive the support of other countries and pose a security dilemma, the V1 has the potential to intervene in the form of military forces and capability combined several countries. Almost in many countries could build up its military strength and ability to consistently believed to have

established a national-economic resource as well as technological resources and strategic industries already established.

Conclusions

The threat is not identical to analyze the threats; threat perception is driven by a sense of crisis, sense of intelligence, and a sense of security; that's why in terms of the perception of 'the senses "a vital role and main.

While the analysis, it can be done without one of the three senses earlier, meaning that perception must do, but the fact the event or the event can only be realized after a while after perceptions occur. It could also be an event does not occur, while analysis can be performed without having to make perception.

Perceptions of threat requires interpretation is influenced by the cognitive power, intuition and knowledge. Reasoned if the perception of the threat as a reason or consideration by the leader or the political elite at the strategic level, reluctantly accepted the threat and / or declare war because of a lack of strategic information (Stein, 2013).

The perception is the foundation for understanding, learning, spark curiosity, and motive to act or action.

Perception by the senses can be arranged pattern, by utilizing individual statements, information processing, how to deal with a crisis, how to make decisions, how to represent something, how to dialogue or communicate, how to channel emotions, ways of thinking and expression.

Recommendation

In order to further research on threat perception can be more extensive and include the threats whole spectrum (external threats and internal threats). Theoretically, threat perception related to war theory, deterrence strategy, conflict, peaceful resolution and diplomacy, threat perception theory in the context of international relations has not given an explanation of why endogenous factors more than exogenous factors quantitatively.

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