

Maritime Conflicts in East China Sea :Computational approach

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JeJu Forum

Research Method

- ▶ **Computational Modeling Approach**
(Stakeholder Analysis+ Agent Based Modeling)
- ▶ Traditional stakeholder analysis has relied on qualitative assessments of stakeholder preferences
 - ▶ *Flexibility and Predictability Issues*
- ◆ **Stakeholder Analysis+ Computer Modeling**
 - ▶ simulate aspects of social behavior

Research Method

◆ 2 Cases of Maritime Conflict in East China Sea in 2015

Case 1 : Senkaku / Diaoyudao Case between Japan and China

Case 2 : Dokdo Case between South Korea and Japan

Computational Modeling

- ▶ Computational modeling approach models the behavior and interaction of stakeholders (such as individuals, families, and firms) within a larger system
- ▶ Two attributes of Stakeholders : Interest, Influence
- ▶ Simulates the iterative political decisionmaking calculus among stakeholders with different interests in and varying influence on the political process.
- ▶ allows analysts to analyze the political dynamics within local, domestic, and international contexts and predicts how the policy positions of competing interests will evolve over time

Steps of Computational Analysis

1. Identify Issue
 2. Identify Environment
 3. Identify Stakeholders (interests & influence)
 4. Run computer simulations
 5. Validate the outcome
- 

4 Types of Stakeholders

- Large influencers with high importance who can either help or impede progress.
Opponents should be isolated, while proponents should be empowered to form larger coalitions.
- Large influencers with little importance who can be mobilized to assist the political process if they support it, or blocked if they oppose it.
- Small influencers with high importance who can either help or impede progress.
Opponents should be isolated, while proponents should be empowered in stronger coalitions.
- Small influencers with little importance who could be motivated to assist the political process, if necessary, but would not be worth the effort to block.

Senkaku / Diaoyu Dao

1. Issue Spectrum

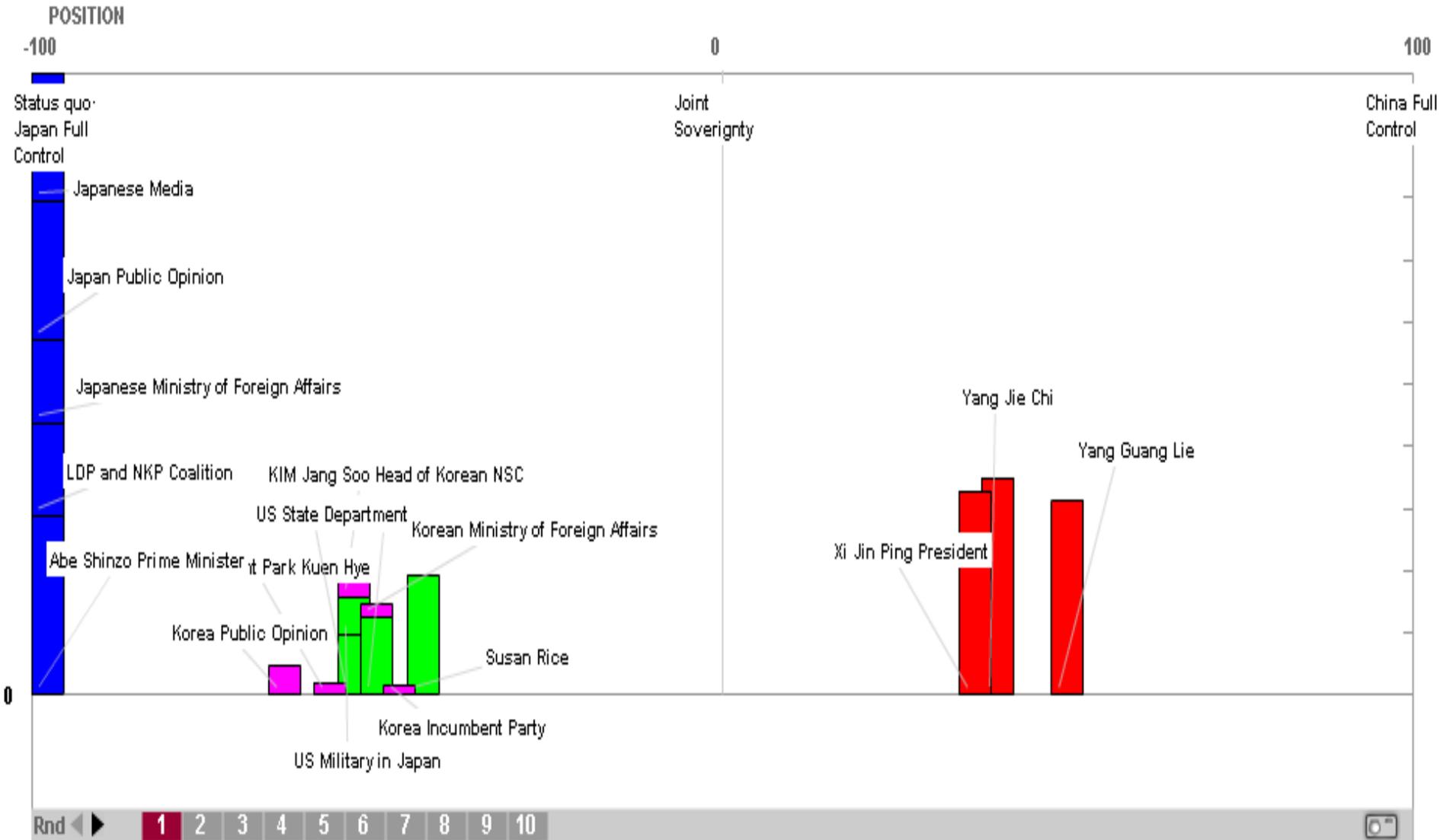


2. Stakeholders

- ▶ Japan (*Blue*) : PM Abe, LDP&NKP Coalition, Ministry of Foreign Affairs, Public Opinion, Media
- ▶ China (*Red*) : Xi Jinping, Yang Jie Chi, Yang Guang Lie
- ▶ ROK (*Pink*) : President Park, Kim Jang Soo, Ministry of Foreign Affairs, Incumbent Party, Public Opinion
- ▶ U.S. (*Green*) : State Department, US Military in Japan, Susan Rice

Senkaku / Diaoyu Dao

< EXHIBIT 1 >



Executive Summary

ON SenKaku/DiaoyuDao Dispute between Japan and China

- ▶ In the Senkaku / DiaoyuDao dispute between China and Japan, current control of Japan over the island will not be altered (EXHIBIT 1).
- ▶ Xi Jin Ping, the President of PRC, is likely to seek accommodation rather than confrontation with Japan but Japan will hold firm (EXHIBIT 1).
- ▶ Analysis shows that if current positions are held stakeholders have no opportunity to settle. (EXHIBIT 2).
- ▶ In case of an accidental escalation (EXHIBIT 3):
 - a crisis is likely to evolve to bipolarized confrontation, not likely to be resolved by negotiation.
 - US will fully back Japan's position
- ▶ Based on the Monte Carlo diagnostic analysis, we conclude that this result is robust (EXHIBIT 4).

ON Dokdo dispute between South Korea and Japan

- ▶ There will be no changes in current S.Korea's holding of Dok Do in the foreseeable future.
- ▶ Based on the Monte Carlo diagnostic analysis, we conclude that this result is robust and not likely to be altered.
- ▶ There are no unseen opportunities which could alter the situation if executed.
- ▶ If South Korean President takes more flexible position, accommodative solution is likely. However, taking flexible position will undermine her political influence domestically.

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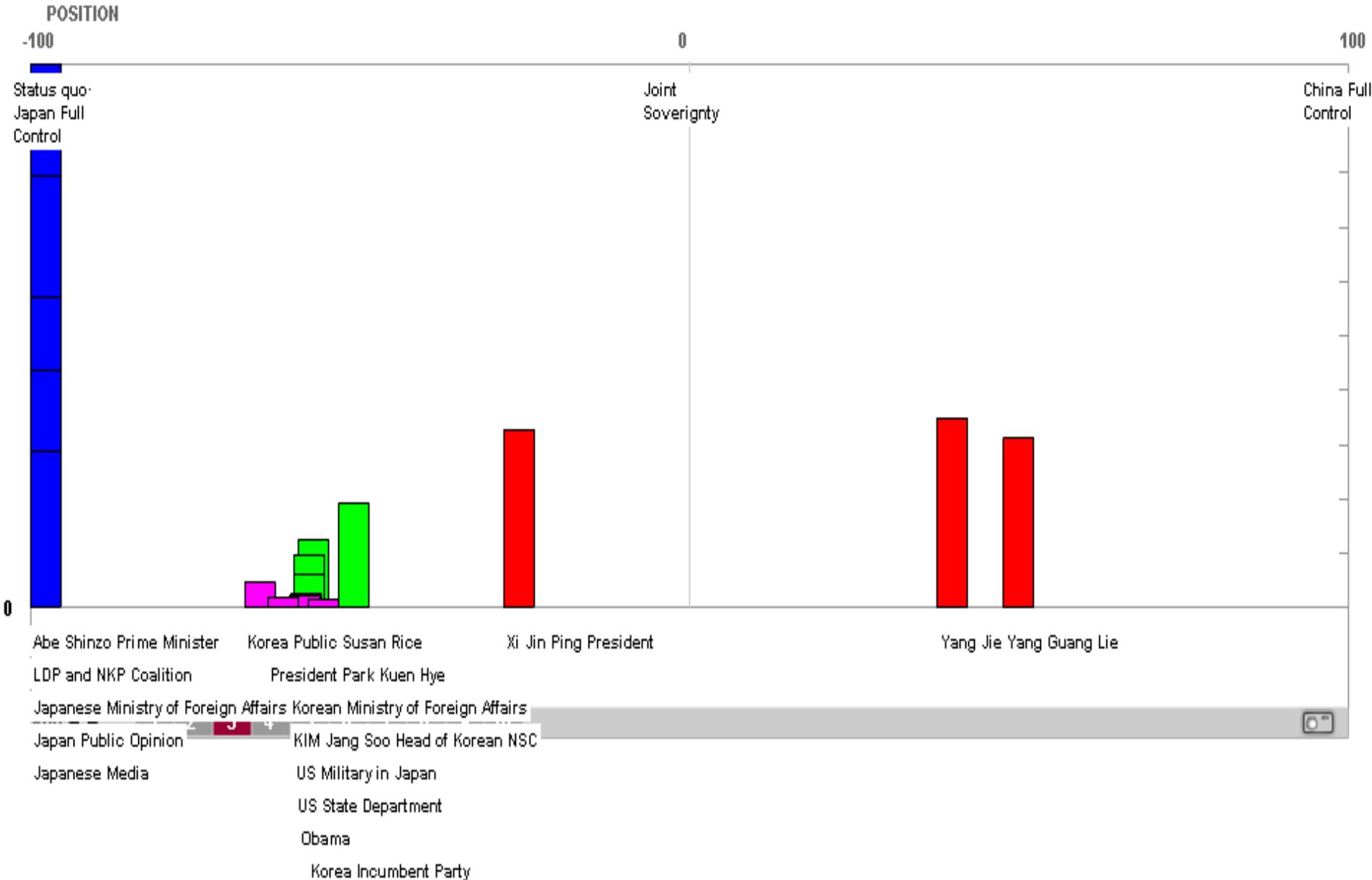
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Senkaku / Diaoyu Dao



Senkaku / Diaoyu Dao

R	Driver	Target	Proposal
3	Japanese Ministry of F	Xi Jin Ping President	
3	Japan Public Opinion	Xi Jin Ping President	
3	Japanese Media	Xi Jin Ping President	

Executive Summary

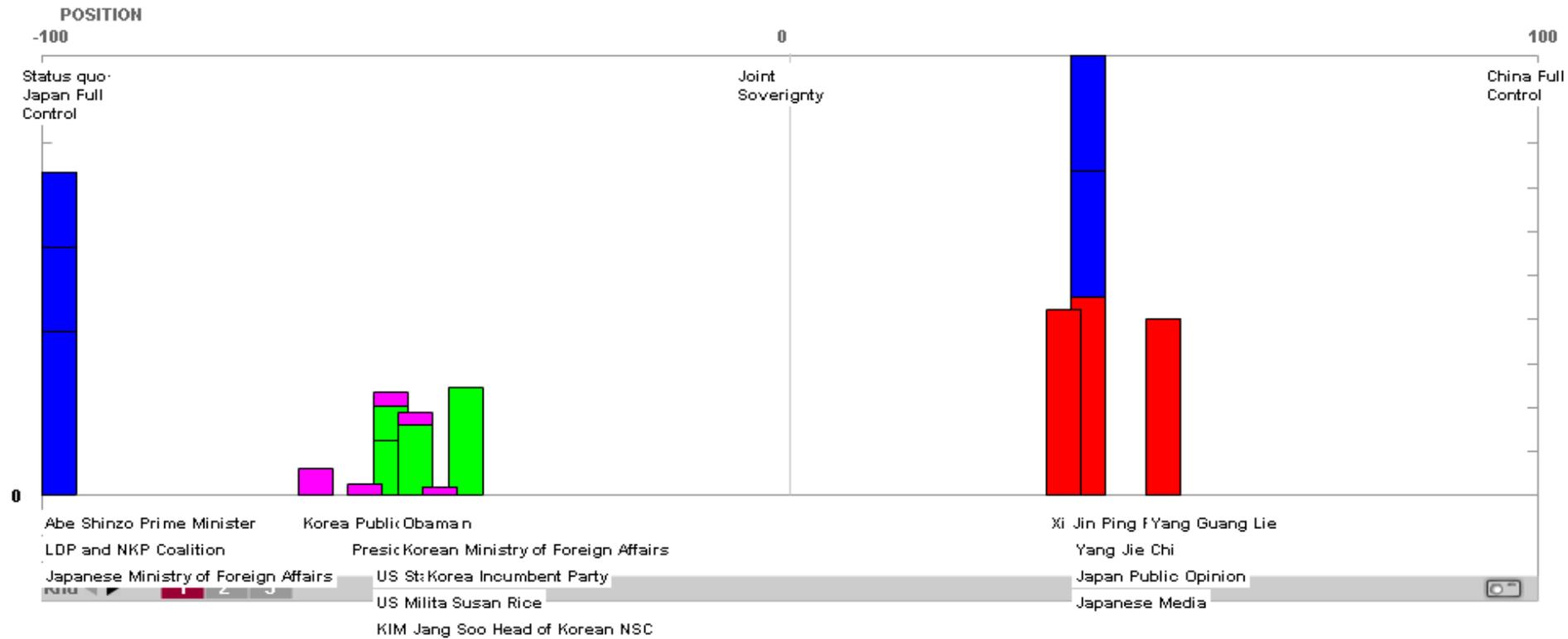
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Senkaku/DiaoyuDao : Accidental Conflict Simulation



R	Driver	Target	Proposal
1	Yang Jie Chi	Abe Shinzo Prime M LDP and NKP Coaliti Japanese Ministry o Japan Public Opinio Japanese Media Korea Public Opinio	-100 40 100

SWOT Analysis

Strength

: This results show that Xi is willing to compromise China's position and the status quo will hold even if China manages to manipulate Japanese stakeholders.

Weakness

: This model fails to provide any peaceful solution

Oppportunity

: This model also suggest that China, especially Xi, is in position to make accommodation and bring peace to the region.

Threat

: The current level of conflict and tension between Japan and China may last for a while.

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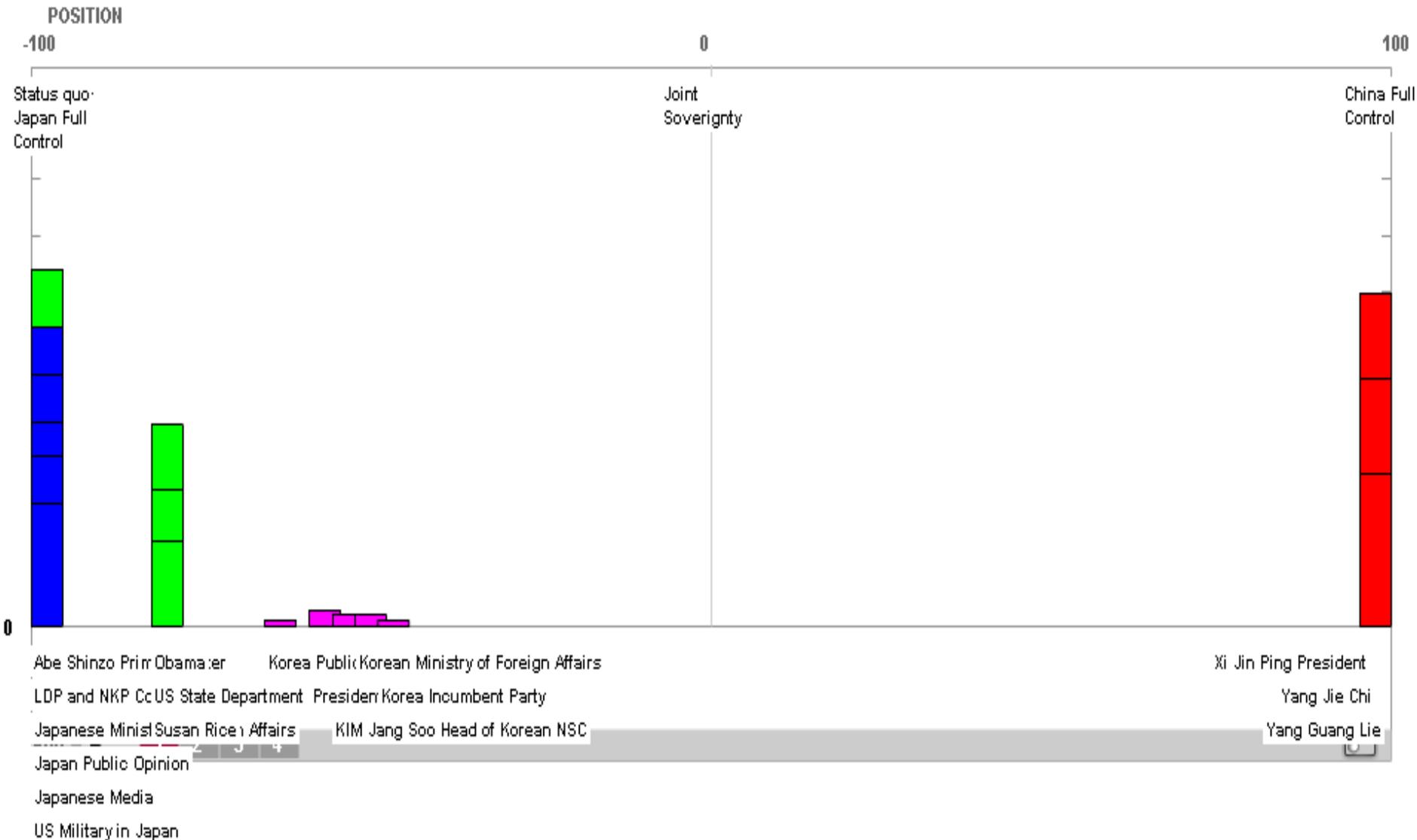
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Senkaku / Diaoyu Dao

< EXHIBIT 3 >

< Militarized Conflict between Japan and China >



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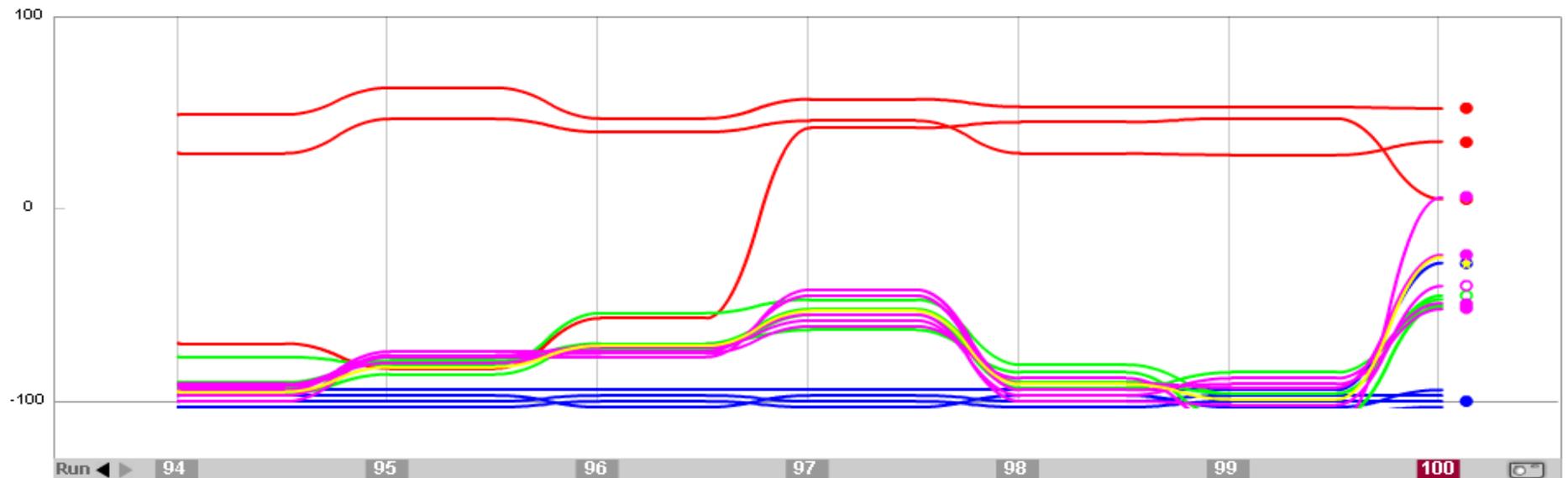
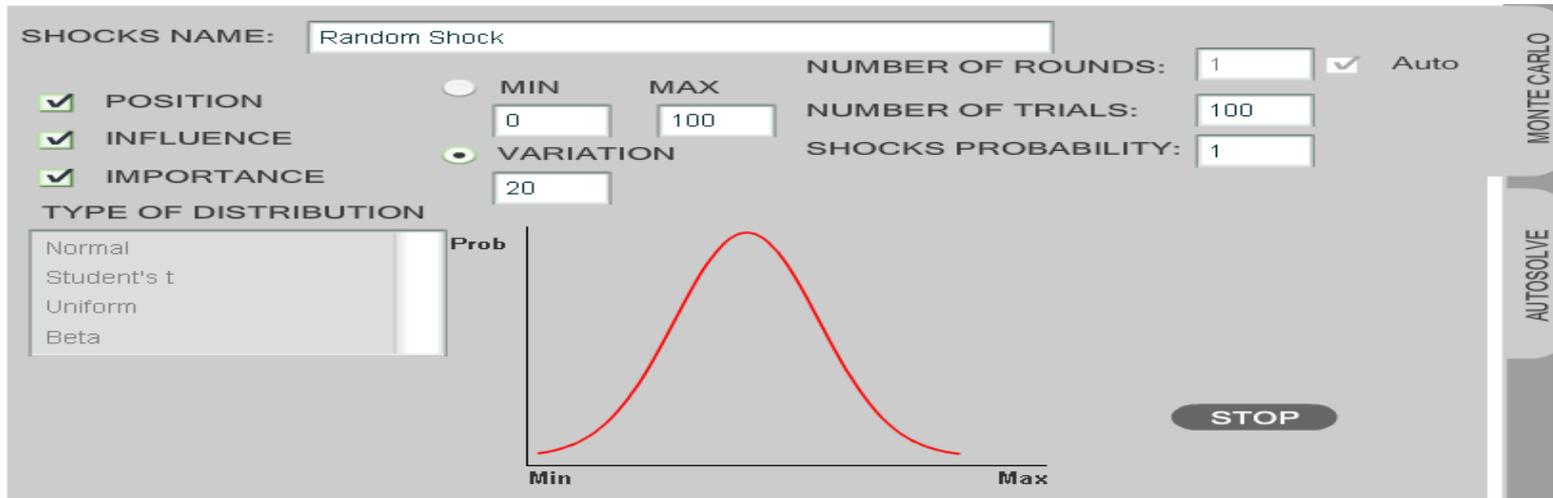
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Senkaku / Diaoyu Dao

< EXHIBIT 4 >

< Monte Carlo Analysis >



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DokDo Case

1. Issue Spectrum



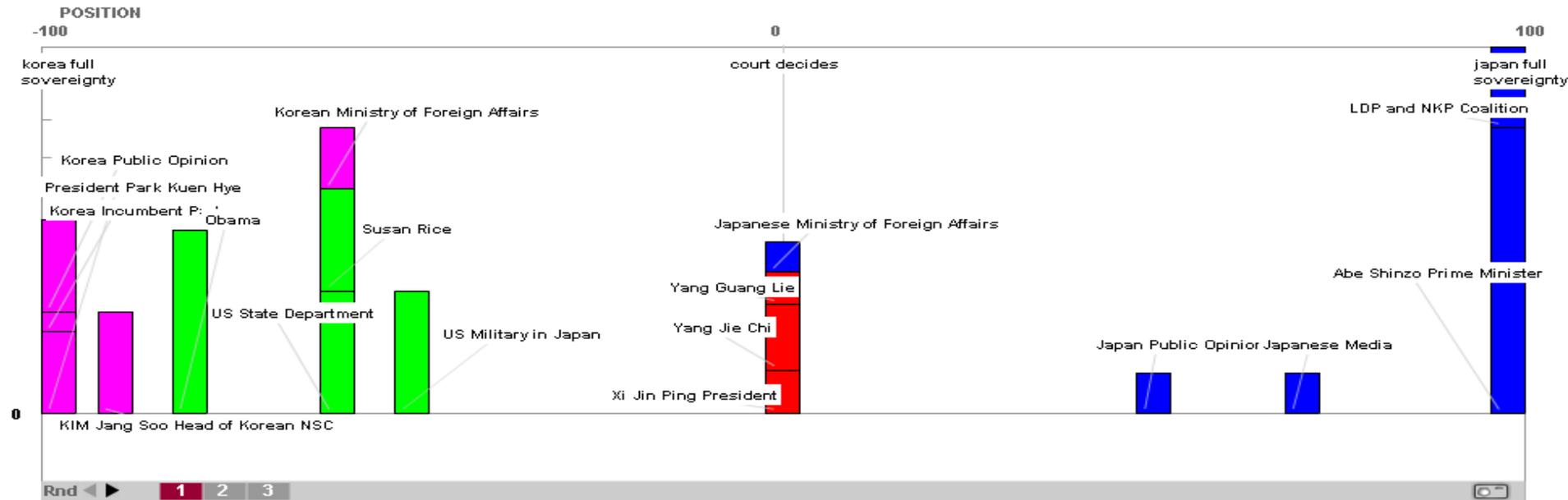
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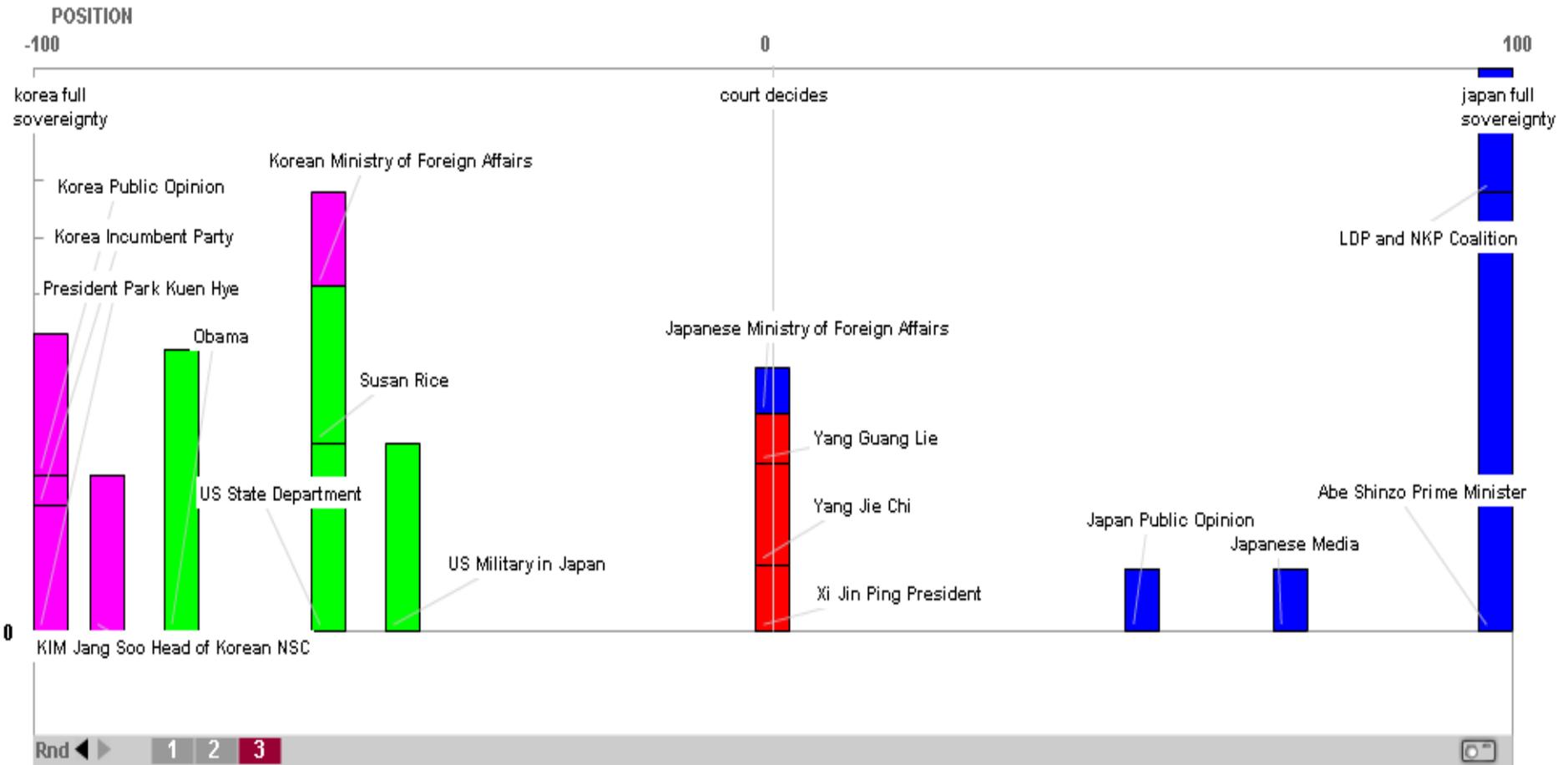
DokDo Case

< EXHIBIT 5 >

< Base Case >



DokDo Case



DokDo Case

< EXHIBIT 5 >

Stakeholder	R1	R2	R3
Median	-60	-60	
Xi Jin Ping President	0	0	0
Yang Jie Chi	0	0	0
Yang Guang Lie	0	0	0
Abe Shinzo Prime Minister	100	100	100
LDP and NKP Coalition	100	100	100
Japanese Ministry of Foreign Affairs	0	0	0
Japan Public Opinion	50	50	50
Japanese Media	70	70	70
Obama	-80	-80	-80
US State Department	-60	-60	-60
US Military in Japan	-50	-50	-50
Susan Rice	-60	-60	-60
President Park Kuen Hye	-100	-100	-100
Korea Incumbent Party	-100	-100	-100
Korea Public Opinion	-100	-100	-100
KIM Jang Soo Head of Korea	-90	-90	-90
Korean Ministry of Foreign Affairs	-60	-60	-60

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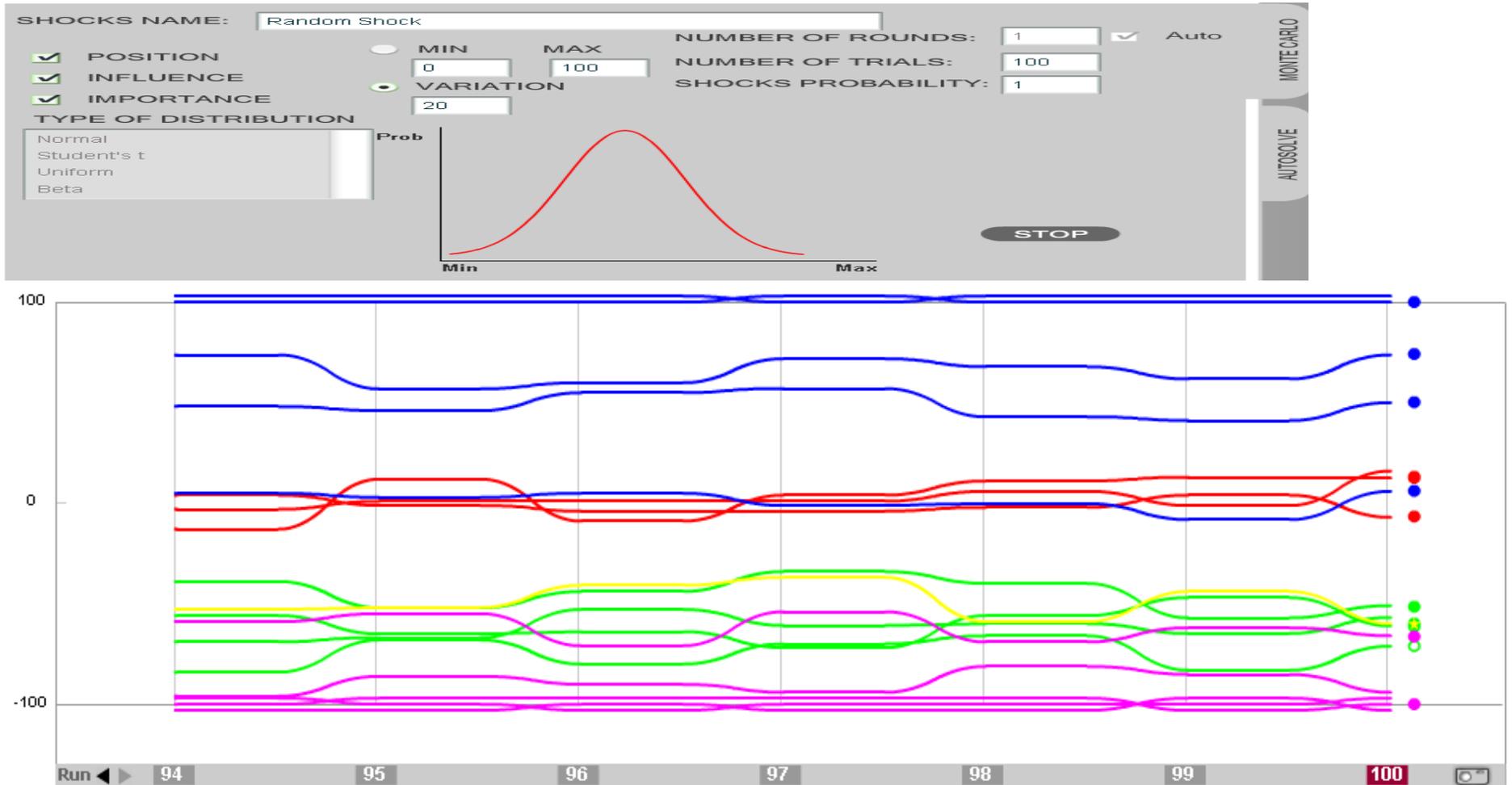
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DokDo Case

< EXHIBIT 6 >



Monte Carlo result shows that the outcome of base case analysis is robust

DokDo Case

Strength

: This results show that the current status quo is stable.

Weakness

: This model fails to provide any tangible & peaceful solution to the tension between South Korea and Japan

Oppportunity

: This model also suggest that both U.S. and China could work as buffer zone between S.Korea and Japan

Threat

: The current level of conflict and tension between Japan and S Korea may escalate very easily. (high volatility)

Executive Summary

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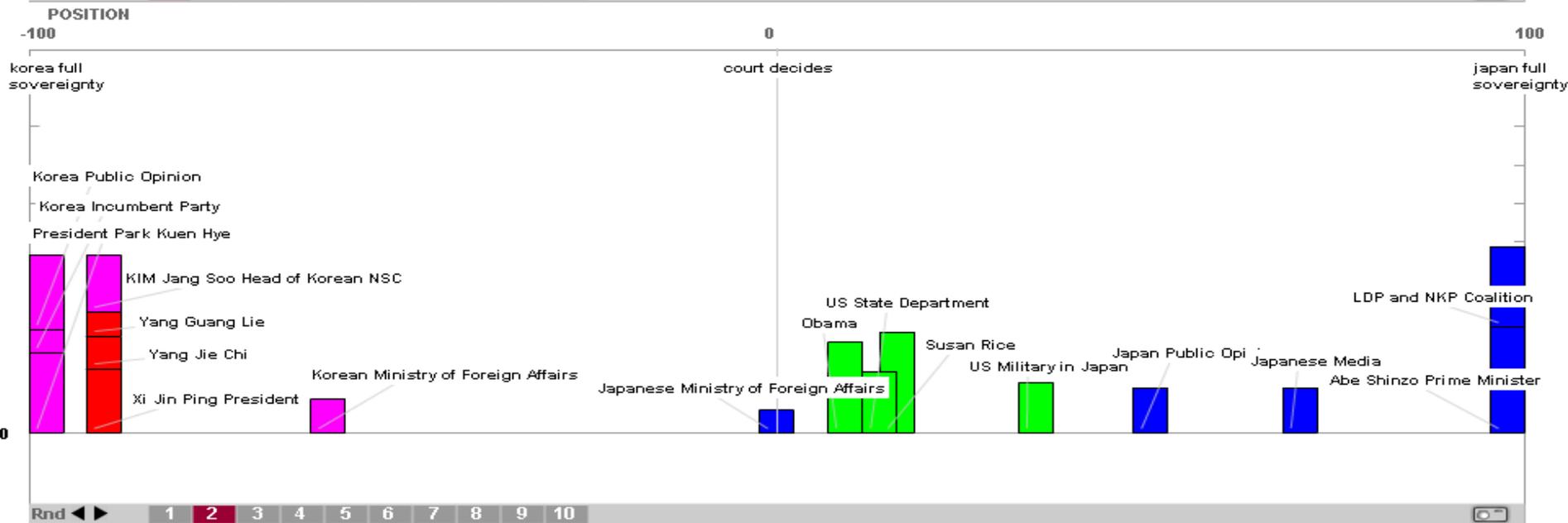
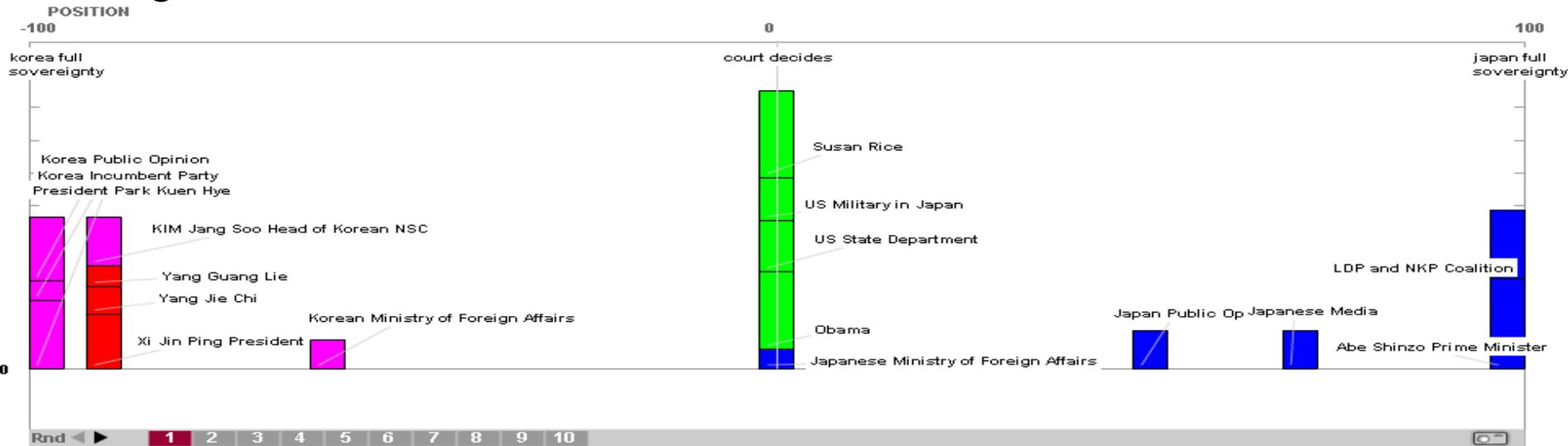
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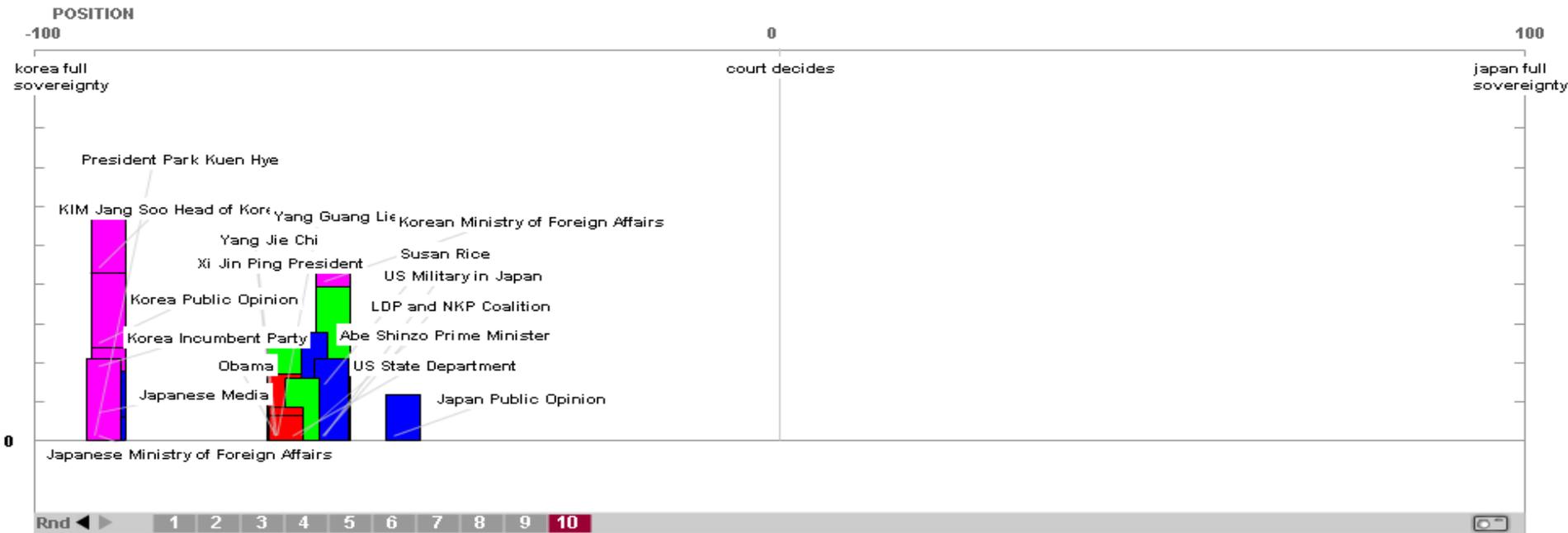
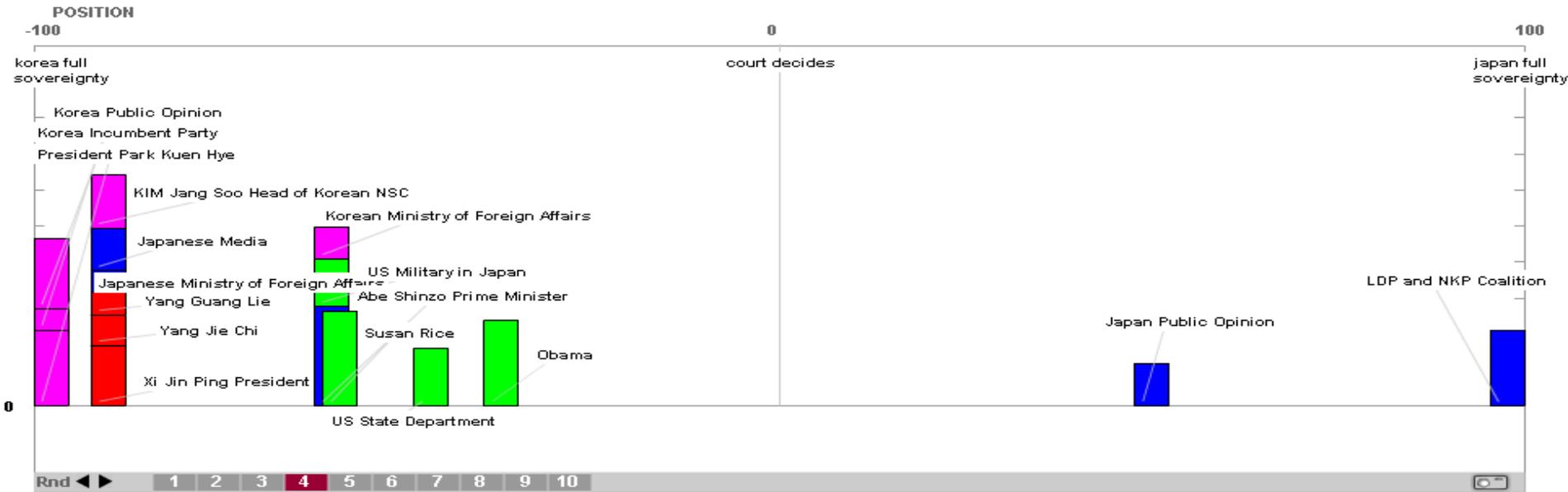
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< EXHIBIT 7 >

<J-K Fight, China sides with K and intervene>



DokDo Case



DokDo Case

Strength

: Shows an agreement can be made by major powers' intervention

Weakness

: Shows that major powers' active involvement is the only way to resolve the issue.

Opportunity

: For South Korea: unexpected incident may provide South Korea a chance to resolve the issue.

Threat

: South Korea may need to make serious compromise to gain China's full support for securing the island it already has.

Executive Summary

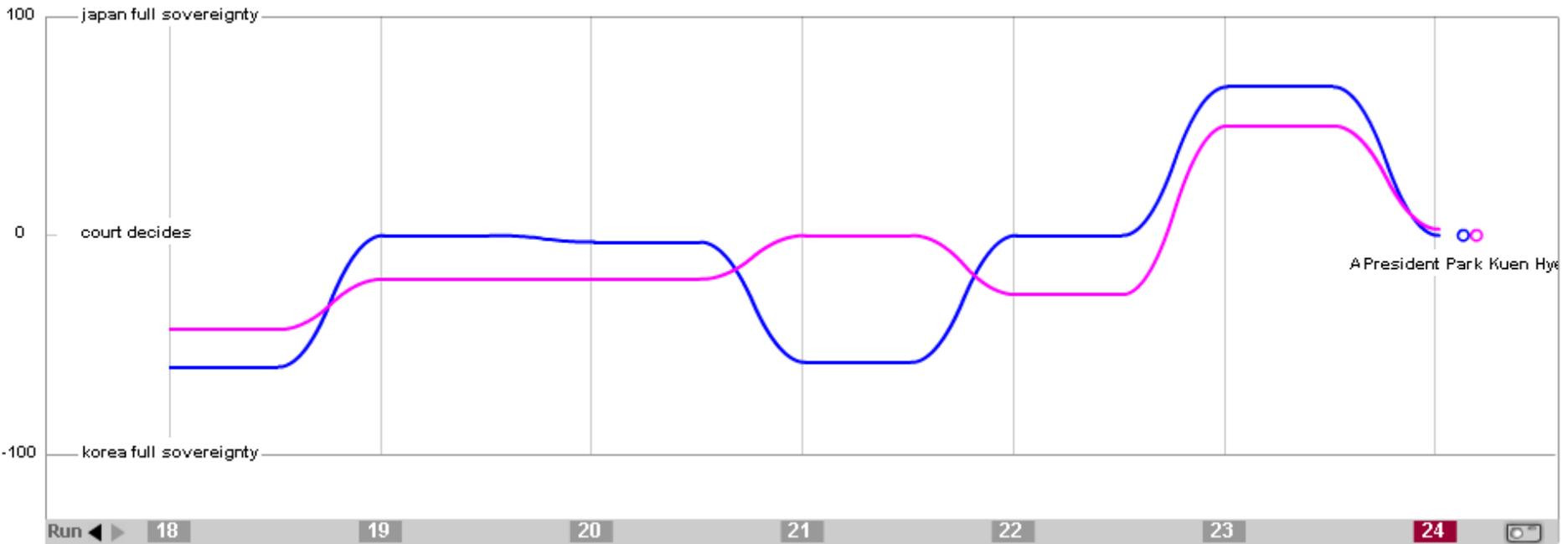
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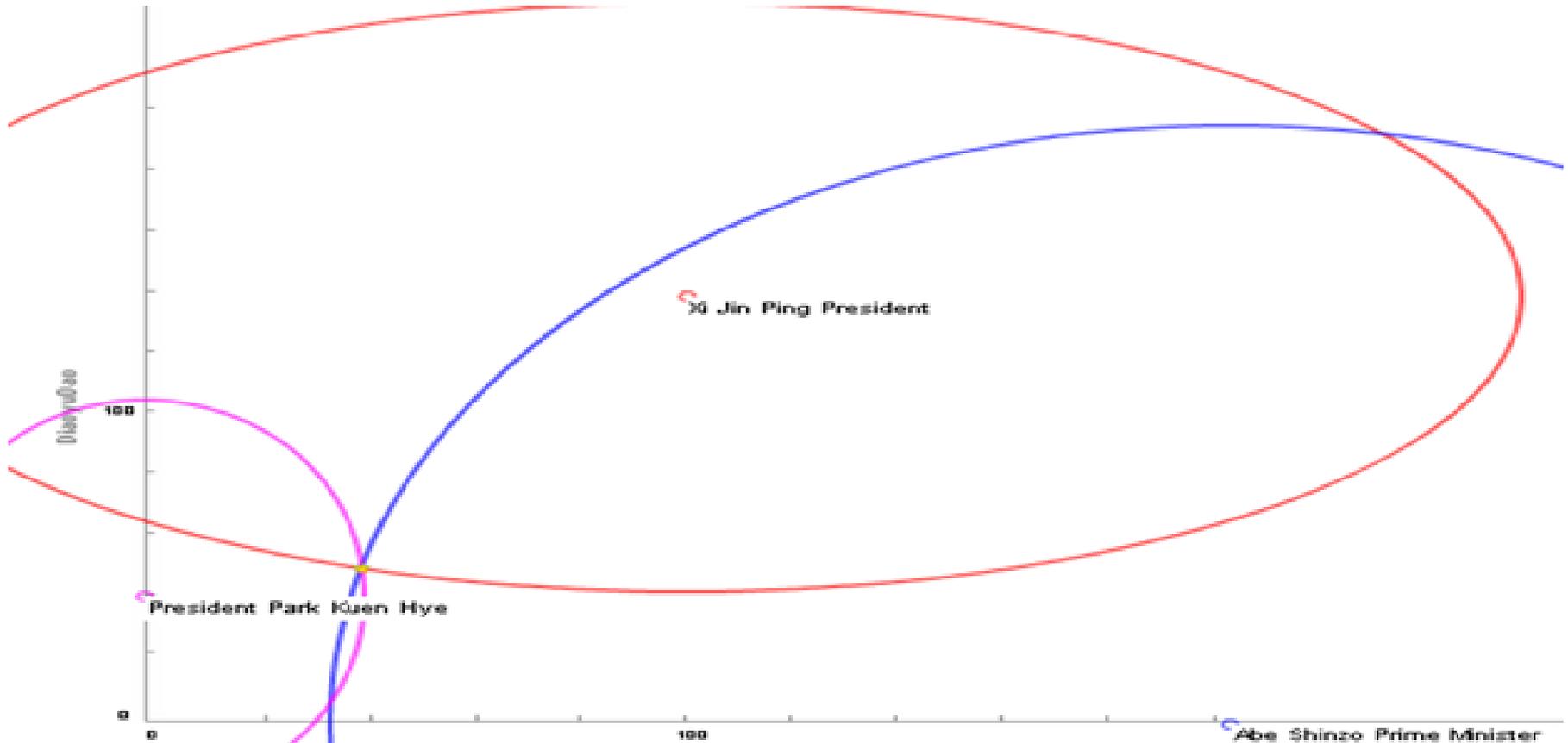
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DokDo Case



- ▶ President Park can resolve the issue if she were to take more flexible position
- ▶ By taking flexible position, she is likely to be isolated in the domestic setting and going to cost the incumbent party next election.

Assessment of Concurrent Solutions



SWOT	
<p>STRENGTHS</p>	<p>WEAKNESSES</p> <ul style="list-style-type: none"> Tradeoff does not allow collaboration between 3 parties.
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> China can negotiate with Korea China can negotiate with Japan 	<p>THREATS</p> <ul style="list-style-type: none"> tradeoff is not useful for this situation.

Implications for IEDO

◆ Regional Security Environment ◆

- ▶ China's aggressive behavior is growing concern
- ▶ Recent standoff between U.S. and China increases security concerns in the region
- ▶ China's nervousness over the recent development in the Korean Peninsula is a double-edged sword
 - could work as a leverage over China or as a stimuli that increases China's aggression

Implications for IEDO

◆ To Do List ◆

- ▶ Need to understand the nature of dynamics among stakeholders at international level as well as domestic level
 - ▶ Need to understand stakeholders' priorities and their influence
 - ▶ Most importantly, need to identify ROK's policy objectives and setup strategies to accomplish those objectives
- 