



The Korea Times

THE NEED FOR A COST-BENEFIT ANALYSIS FOR NUCLEAR DEBATE IN JAPAN

Michiru Nishida, Professor, School of Global Humanities and Social Sciences, Nagasaki University.

19 December 2025

Extended nuclear deterrence has faced questions about its credibility since the concept was formed in the early Cold War era.

Today, within Japan, a strong sense of unease surrounds the future of the U.S. nuclear umbrella, fuelled by the further deterioration of the security environment in the surrounding region and the inward-looking orientation of the United States, epitomised by the Donald Trump administration.

As evidenced by a candidate's statement during the recent House of Councillors election in July that "nuclear armament is cheap," discussions about Japan developing its own nuclear weapons are occurring more intensely than ever before. Strong counterarguments exist, asserting that nuclear armament is absolutely unacceptable for the only nation to have suffered atomic bombings, and I personally sympathise with this view.

There is, however, a need to move beyond such emotional arguments and compare the options surrounding nuclear armament for Japan strictly within a cost-benefit analysis framework, with the current status quo of the US nuclear umbrella as a non-nuclear-weapon state, in order to consider the future direction of Japan's policies.

The argument for independent nuclear armament likely emerged due to Japan's deteriorating security environment and a growing recognition of the gap between the perceived need for a higher level of deterrence and the perceived level of deterrence actually provided in terms of its capability, will and credibility. This deterrence gap is expected to be filled through an indigenous nuclear weapons capability. (Figure 1 below).

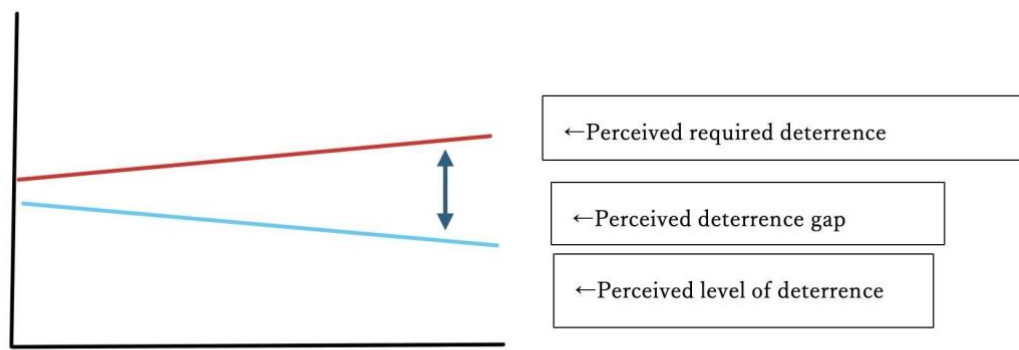


Figure 1

If nuclear armament could indeed bridge this deterrence gap, it would constitute a benefit to Japan. However, the situation is not as simple as solving the deterrence gap through the possession of nuclear bombs, as Japan would also face multifaceted costs related to nuclear armament.

First, there are the diplomatic and economic costs of nuclear armament. Even before achieving nuclear weapons capabilities, Japan would need to undergo a lengthy process involving the production of fissile material for nuclear weapons and conducting nuclear tests. At that stage, detection by the International Atomic Energy Agency (IAEA) would be highly likely. Japan would have to withdraw from the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) to test nuclear weapons. This could result in sanctions from the international community and severe damage to Japan's international reputation.

Second, the domestic political coordination costs for Japan too are high. In Japan, even the deployment of the Aegis Ashore missile defense system was abandoned due to failed negotiations with local governments. Deciding where to locate nuclear production facilities and test sites, let alone nuclear deployment, would incur enormous domestic political costs.

Third, there are security costs associated with the vulnerability of an initial nuclear force. Even if Japan were to acquire nuclear weapons, its initial nuclear force would remain primitive and small-scale, exposing it to the risk of a preemptive strike by an adversary. To avoid such risks, Japan would be forced to adopt an extremely aggressive nuclear doctrine that relies on the threat of early nuclear use to ensure deterrence. Can Japan, as the only nation to have suffered atomic bombings, resolve to use nuclear weapons first? This raises issues of credibility in nuclear deterrence.

Fourth is the fiscal cost of building credible nuclear deterrence. Nuclear forces must be built on delivery systems with high survivability. Multiple types of nuclear forces would be required to establish deterrence, entailing significant fiscal costs. These costs cannot be covered by cutting conventional forces, which have the highest priority. They would

therefore represent additional costs imposed on top of the already increasing defense budget.

Building nuclear forces that are capable of reliably closing the deterrence gap requires a timeline far longer than simply manufacturing nuclear bombs, accompanied by many other costs. Therefore, the question to consider is whether and at what point does paying these costs become worthwhile.

This point corresponds to the intersection of the increasing deterrence gap curve and the decreasing cost curve in Figure 2 below. This intersection point represents the critical threshold where the marginal benefits of nuclear armament, driven by a widening deterrence gap, outweigh the marginal costs. While the exact timing for such an intersection cannot be determined, the principle that the benefits must justify the enormous costs suggests that unless the deterrence gap is extremely large — that is, unless the Japan-U.S. relationship breaks down and the Japan-U.S. Security Treaty collapses, the costs would likely outweigh the benefits.

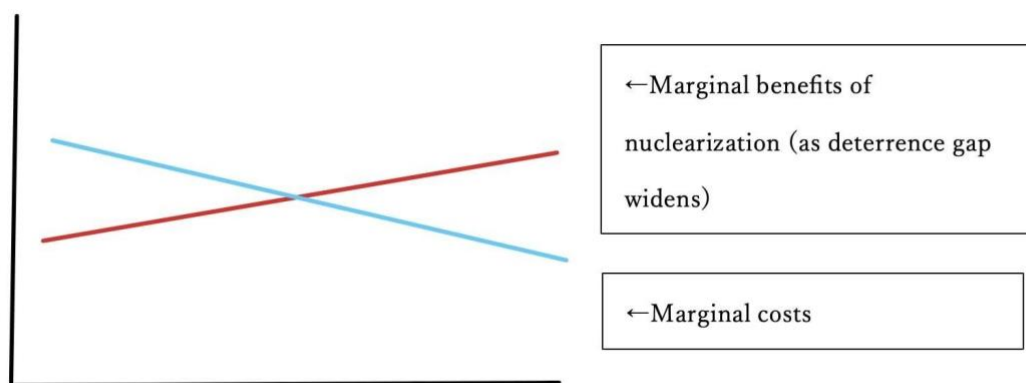


Figure 2

At present, the deterrence gap remains relatively small. Japan would be better off closing this gap through other means, such as strengthening Japan-US relations to enhance the credibility of extended deterrence, while simultaneously securing long-range strike capabilities against high-value targets. On the other hand, precisely because building credible nuclear deterrence requires a long timeline, it could be argued that moves to acquire nuclear weapons need to begin at a considerably earlier stage.

US approval would be indispensable in such a case. Even if the United States were to accept friendly proliferation, approval is not guaranteed. If Japan were to decide on nuclear armament and the U.S. were to oppose it, the Japan-U.S. security framework could be significantly undermined. As long as this possibility exists, Japan's nuclear armament in the short term would actually hinder its deterrence capability, rapidly

widening the deterrence gap. At least at this point in time, nuclear armament would be extremely risky from a deterrence perspective.

In any case, Japan must face the harsh security environment head-on, assess future developments and conduct a cool-headed, multifaceted cost-benefit analysis.

The opinions articulated above represent the views of the author and do not necessarily reflect the position of the Asia-Pacific Leadership Network or any of its members.

This commentary was originally published in the [Korea Times](#), and on the [APLN website](#).

ABOUT APLN

The **Asia-Pacific Leadership Network (APLN)** is a Seoul-based organisation and network of political, military, diplomatic leaders, and experts from across the Asia-Pacific region, working to address global security challenges, with a particular focus on reducing and eliminating nuclear weapons risks. The mission of APLN is to inform and stimulate debate, influence action, and propose policy recommendations designed to address regional security threats, with an emphasis on nuclear and other WMD (weapon of mass destruction) threats, and to do everything possible to achieve a world in which nuclear weapons and other WMDs are contained, diminished, and eventually eliminated.



@APLNofficial



@APLNofficial



apln.network



aplnofficial