

# Why Didn't Sanctions Stop North Korea's Missile Program?

North Korea's long-range missile program has made significant technological advances in the past few months.

For most of the past 20 years, the international community has struggled to stop this kind of progress.

Kim Jong Un's plan to [target four test missiles](#) approximately 20 miles off the coast of the U.S. territory of Guam shows just how destabilizing this rapidly advancing ballistic missile program can be. North Korea's plan – which Kim claims will be finalized later this month – follows last month's [two successful tests](#) of an intercontinental ballistic missile with the capability to hit the U.S.

My research on how states [illegally obtain missile technologies](#) and my experience conducting [outreach related to U.N. sanctions](#) give me some insight into the methods North Korea used to make illicit procurements and the limitations in using technology-based sanctions to prevent them.

## Technology-based sanctions

In 2006 – following North Korea's first nuclear test – the U.N. Security Council [prohibited](#) the “supply, sale or transfer” of “items, materials, equipment, goods and technology” that could contribute to the country's missile program.

Efforts to prevent North Korea's acquisition of missile technology by certain nations – notably the United States – had been [underway since the 1990s](#). However, the U.N. sanctions

went further by placing standardized legal requirements on all states to prevent the development of North Korea's weapons of mass destruction programs.

These sanctions are “universal” – obligatory for all states around the world. Each nation is responsible for implementation within its borders. Missile, nuclear and military technologies are regulated through national export control systems. Exports of certain goods and technologies need to be granted an export license by the government. This allows governments to do a risk assessment on transactions and minimize the diversions to undesirable uses, such as Weapons of Mass Destruction programs or human rights abuses.

In theory, all countries should have the capacity to implement technology-based sanctions. Having an export control system has been mandatory for states since the passage of [U.N. Security Council resolution 1540](#) in 2004. However, more than a decade after this resolution was passed, many nations – particularly developing ones – are still struggling with [implementation](#).

This has led to uneven execution of missile-related sanctions on North Korea. A recent report has described the U.N. sanctions regime as a “[house without foundations](#),” noting that not a single element of the sanctions regime “enjoys robust international implementation.”

## Sources of missile technology

[As has advanced, its sources of missile technology have evolved.](#)

North Korea began by importing full missile systems and seeking to reverse-engineer or replicate them. For example, after procuring short-range [Scud missiles](#) from Egypt in the late 1970s, North Korea “reverse-engineered” them by the mid-1980s. The 1990s saw North Korea develop the [Nodong](#), a

scaled-up Scud design. It also experimented with longer-range missiles in the late 1990s and mid-2000s. These Taepodong missiles drew together elements of the shorter-range systems such as their engines. The [Taepodong-2](#) allegedly had an intercontinental range, although it was never successfully tested.

Since taking power in 2011, Kim Jong Un has accelerated North Korea's missile program. In the past year alone, [the country has tested](#) four seemingly new missiles for the first time – including a [submarine-launched ballistic missile](#) and an [intermediate range ballistic missile](#), as well as the ICBMs tested last month.

The country has also sought to learn how to produce required parts and components at home. North Korea's program is opaque, and the balance between reliance on external sources and homemade parts is unclear, but some episodes provide insights.

Rocket debris salvaged from the sea following a satellite launch in December 2012 suggested an ongoing reliance on the international market place for parts. A 2013 [U.N. report](#) suggested the rocket had used modern components sourced from China, Switzerland, the U.K. and the U.S., as well as “cannibalized” Scud components and other 1980s vintage Soviet parts.

Since then, North Korea has continued to pursue more advanced manufacturing technologies. Footage from the leadership's [frequent factory visits](#) has shown that North Korea has acquired advanced computer numerically controlled machine tools which are of use in missile and nuclear programs. Photographs from a parade in April 2017 [suggest](#) that North Korea's new submarine-launched ballistic missile was constructed with wound filament. This material is lighter and stronger than aluminum, and a significant step forward in capability.

# Evading sanctions

To make these advances in their missile program, North Korea has had to evade sanctions and the broader scrutiny of the international community. Their illicit procurement techniques include using front companies, obscuring the end user, falsifying documentation and mislabeling cargo. A 2017 [U.N. report](#) notes that North Korea's evasion techniques are "increasing in scale, scope and sophistication."

North Korea's military and WMD procurement networks are global in nature. [According to one study](#), they have touched more than 60 countries.

Due to geographical proximity, historic relationship and broader trading links, China has played an unparalleled role in these networks. Many middlemen and procurement agents have operated in [China](#), and increasingly – as the country's private sector develops – its manufacturers have been a source of technology. A series of revelations in early 2017 demonstrated that Chinese manufacturers and Chinese-North Korean joint ventures are benefiting North Korea's missile program – including with [machine tools](#), [components](#) and [materials](#).

## The effects of sanctions?

Observers might rightfully ask: Have sanctions failed?

This question is complicated. It might be more useful to consider what the effects of sanctions have been.

The primary objectives of technology-based sanctions have been to slow and prevent North Korea's nuclear and missile development. The recent ICBM tests clearly prove these measures have not prevented North Korea's missile development. Whether they slowed progress is debatable.

What is undeniable is that sanctions have had unforeseen

consequences. [Research suggests](#) that sanctions could have made North Korea's procurement efforts more sophisticated as Chinese middlemen monetize the risk.

Americans tend to view North Korea as an inward-looking, economically isolated state cut off from the international community. However, the country's illicit networks – including those supplying its missile program – are global and responsive. Ultimately, they will be difficult to counter.

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