Adaptive Capacity and Financial Fragmentation in Sanctions

Luke Thirlwell Gaudois, School of International Relations
Supervisor: Annette Stimmer

Abstract

The coercive strength of sanctions is not defined solely by the sanctions themselves. A limit exists based upon whether or not the targeted country can circumvent sanctions by building a new way to pay, and the ability to circumvent sanctions varies greatly among countries.

Financial sanctions work by severing a country's access to the international payments systems that facilitate cross-border payments which are mostly Western controlled. Severing a country's access to international payments is intended to severely restrict a country's economic activities. However, they also provide the targeted country with the incentive to develop an alternative system.

Thus, if a state is able to develop an alternative system, then the coercive impact of sanctions will be reduced.

This paper analyses what factors dictate a states ability to adapt towards sanctions

Theoretical Framework and the Four Dimensions of Adaptive Capacity

The incentive to fragment is universal it is the ability to act on this incentive which varies. Four dimension of adaptive capacity come into play Domestic institutional capacity, Structural market position, Substitutability, and Time.

Domestic institutional capacity.
Does a state have the ability to develop alternative payment systems on its own rather than simply moving its dependence.

Structural Market Position
Does the state hold critical resources which it can use to draw in partners. A state other can easily do without does not get to shape the terms of its adaptation.

Substitutability
Does the state have access to the goods it needs through intermediates willing to bear the compliance risk.

Time
It is easier to develop alternative payment systems in preparation for sanctions rather than having to act in response.

Case Study Comparison

	Russia	Iran
Domestic institutional capacity	• Sold 80% of US Treasury holdings by 2018, in order to cut dollar dependence (Gould-Davies, 2018, p. 13) • Yuan share of reserves rose 2.8% to 14.4% and dollar share of trade settlement fell 61.5% to 48.3% in a year (Xu Wenhong, 2023, pp. 9-14) • Built out SPFS and Mir, though reliant they are reliant on Chinese systems (Snegovaya, Fenton and Dolbaia, 2025, p. 8)	• SHETAB runs through Russia's Mir, not an independent channel (Snegovaya, Fenton and Dolbaia, 2025, p. 8) • EU-backed INSTEX failed due to compliance risk and will (Akın, 2025, pp. 1383-1384) • Shifted dependence away form the west rather than fully developing its own
Structural market position	• Being Europe's global energy chokepoint led to sanctions being staggered • Large enough to draw in partners across the world • GDP was buffered by a $227 billion current account surplus and thus only fell 2.1% (Connolly, 2023, p. 10)	• Iran crude was treated as replaceable meaning sanctions were introduced on the targeting states terms (Massol et al., 2024, p. 643) • Did not have the structral market strength to pull in partners on their own terms.
Substitutability	• Was able to direct whole sectors of the economy towards new markets such as India, China and Turkey (Connolly, 2023, p. 10). • Trade was able to be redirected thus limiting the impact of the sanctions.	• Iranian firms had to replace their inputs form the EU with either UAE and Turkish intermediaries or directly form China both at a higher cost (Farzanegan and Batmanghelidj, 2023, p. 215). • Fragmented the Menthol market as a prices diverged based on compliance risk tolerance (Massol et al., 2024, pp. 643, 649).
Time	• Decade of staggered sanctions allowed adaptive capacity to be developed in preparation.	• Comprehensively sanctioned in 2012. • Failed to prepare in advance for sanctions.

Discussion and Counter-Arguments

The fact that the dollar remains dominant within global financial system with no current viable alternative to fulfill all it's functions. The dollars share of global reserves fell form 71.5% in 2001 to 57.8% in 2024, maintaining it's majority over the two decades in which this fragmentation has been observed (Giumelli, 2025, p. 12).

Firstly, the paper focuses on coercive leverage rather than purely economic impact, Russia suffered economically but has yet to conceded anything when it comes to Ukraine. Secondly, share of foreign reserves is a trailing indicator as seen with sterling maintaining it's majority despite losing confidence (Cohen, 2018, p. 142).

Conclusion and Further Research

Sanctions face a conditional limit determined by a states capacity to adapt.

- This limit in of itself is uneven as seen through the case studies of Russia and Iran.
- Likewise, it is non-linear as coercive power holds until a workable alternative is built. Russia was able to adapt at a state level rather than Iran's smaller mostly firm level adaptations through unofficial rates and regional workaround.
- Additionally, each round of sanctions weakens the coercive strength of the next. The speed of adaptation across successive sanctions and how mid sized states smaller than Iran and Russia interact with this limit.

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References and Full Paper

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University of St Andrews