

Democratisation Becomes Less Likely When Arms Technology Surpasses Economic Development

Jacob Hariri and Asger Wingender



DEMOCRATISATION BECOMES LESS LIKELY WHEN ARMS TECHNOLOGY SURPASSES ECONOMIC DEVELOPMENT

Professor Jacob Hariri and **Professor Asger Wingender**, both at the University of Copenhagen, recently noticed that in most countries outside Europe and North America, economic development lags far behind government access to highly sophisticated weapons. The professors draw lessons from history and their extensive statistical analyses to warn that such an imbalance makes repression cheaper and easier, and democracy less likely to emerge.

Economic Development and Technological Advances

Economic development is a primary driving force for improving the wellbeing of nations and their quality of life. It has also traditionally been considered the most reliable path to democratisation, through which a political regime moves towards greater representation of 'the people' in terms of government, with an emphasis on equality and equity for all. But why is the number of democracies in the world not increasing, given that economic development spreads farther and wider than ever before?

Professor Jacob Hariri and Professor Asger Wingender at the University of Copenhagen have investigated one possible answer to this conundrum. They note that behind the spiralling economic development over the past two centuries lies technological progress – and technological progress has also led to advances in military technology. More effective and more lethal options are available than ever before, all at the beckoning of leaders – democratic and otherwise.

Professor Wingender explains that 'advances in military technology make it cheaper (both in terms of men and money) for incumbent leaders to defend themselves against internal and external foes'. For example, Syrian combat helicopters reportedly fired machine guns on unarmed protesters during the initial phase of the 'Arab Spring' in a show of force that would have been unimaginable a century-and-a-half before. Back then, widespread anti-government protests, uprisings, and armed rebellions such as the ones that spread across the Arab world during the Arab Spring might have succeeded. Today, popular resistance is much less likely to succeed in the face of determined autocratic governments equipped with modern-day arms technology.

A Modern-Day Mismatch

As we can see, there is a modern-day mismatch between the arms available to autocratic rulers relative to societal advancement. These arms capabilities only became available in Western Europe *after* the stepping stones toward modern

liberal democracy had been laid. For countries where democracy has not yet been established, the accessibility to arms technology is a serious concern because, as the Arab Spring scenario confirms, leaders have the potential to use these advances even against their own populations.

Professor Hariri and Professor Wingender have sought to explain how this came to be. They note that most military innovation in the past two centuries has occurred in Western Europe, the USA, and the Soviet Union. While key drivers of economic modernisation, including civilian technologies, property rights, and human capital, have been slow to diffuse across the world, new military technology has been traded much more quickly to other countries – including those that are far less economically developed.

The upshot is that rulers of relatively economically and socially underdeveloped countries have ready access to disproportionately sophisticated weapons which they can – and do – use to repress popular uprisings and protests. But that is



not the only problem. Professor Wingender adds, 'Ever cheaper and more effective military arms mean that modern autocrats need fewer financial resources and fewer loyal men to protect them against internal and external foes. As a consequence, autocrats do not have the same need to create effective bureaucracies or give the population representation in return for higher taxes or conscription.' Many scholars concur that these needs explain why effective bureaucracies emerged in Western Europe.

Investigating a Complex Problem

To gain an empirical understanding of this complex problem, Professor Hariri and Professor Wingender undertook an in-depth study of the international diffusion of 29 groundbreaking military technologies over the past two centuries. Examples include the breech-loading rifle, the machine gun, and the combat helicopter. Each technology represents a greater capacity to inflict violence and, importantly, at less expense to the government than its earlier variants. For example, the modern assault rifle only costs the American government 2.5 times as much as a flintlock rifle did in the first half of the 19th century, despite being far more lethal.

Professor Hariri and Professor Wingender collated data from 1820–2010 on independent states and their use of different arms technologies. The data set contains information such as the year in which Peru adopted recoilless artillery, the year in which Ethiopia adopted its first jet fighter, and so on. This work took many years to complete due to the need to extensively consult archives and scholarly works, and meet with military history and technology experts.

One thing became clear immediately after the data set was completed. Compared to gross domestic product (GDP, a typical marker of a country's economic health), the adoption of new arms technology was substantially faster in poorer countries than in Western Europe or North America. The GDP per capita in the poorest countries in 2010 were lower than in the richest countries as far back as 1820. Despite this, the poorest countries had, on average, adopted the same number of military technologies as the rich group had in the 1960s. So, what happens when there is a large imbalance between arms technology and economic and social modernisation?

Understanding Bargaining Power

Professors Hariri and Wingender point out that many of the world's poorer countries are ruled by autocrats, whose unprecedented access to advanced military technologies allows them to be much more resistant to the demands and efforts of pro-democracy movements. Indeed, the data show that autocracies are much less likely to become democratic with time and higher income when the ruler possesses advanced arms. But this is a just correlation – an alternative explanation would be that strong autocrats simply adopt more military technology.

To separate cause and effect, Professors Hariri and Wingender undertook an extensive statistical analysis. The first step was to study arms diffusion. They discovered that in addition to many other factors driving the international arms trade, arms trade followed certain geographical patterns which were beyond the



reach of individual governments. Using these geographical patterns and information on where different arms technologies were invented, Professors Hariri and Wingender were able to estimate the causal effect of advanced arms on the likelihood of democratisation and the quality of government bureaucracies.

‘Ever cheaper and more effective military arms mean that modern autocrats need fewer financial resources and fewer loyal men to protect them against internal and external foes. As a consequence, autocrats do not have the same need to create effective bureaucracies or give the population representation in return for higher taxes or conscription.’

The results showed that the chance of a democratic transition today is about 1.3 percentage points lower per year in autocracies with the most advanced arms compared with autocracies with access to the least advanced weaponry. Over a ten-year period, that amounts to a 14 percentage point difference in the likelihood of democratisation. Having had access to advanced arms for extended periods similarly had large negative causal effects on the quality of the bureaucracy.

A Pessimistic Outlook

While the popular Modernisation Theory predicts that economic modernisation precipitates democracy, the work of Professors Hariri and Wingender shows that this path to democracy might not be available across all stages of economic and social development. Clearly, the conditions for democratisation and state-building that Western Europe faced historically are very different from those that African and Asian countries now face. And as military technologies become ever more sophisticated, they will likely make autocracies even more entrenched in the future.

Professor Wingender believes it is important to acknowledge that many countries have seen a change in the balance of power between state and citizens, much to the advantage of the state. And this should affect the way the Western world relates to autocratic regimes.

‘Our study suggests that we in the Western world may have been naïve when it comes to modern dictatorships, and that we cannot simply apply Western European experiences with democratisation to the rest of the world.’

Meet the Researchers



Professor Asger Mose Wingender
University of Copenhagen
Copenhagen
Denmark

Dr Asger Mose Wingender obtained a Master's degrees in Economics in 2010. After periods as visiting scholar at both University of California, Berkeley, and Columbia University in New York City, he obtained a PhD in Economics from the University of Copenhagen in 2014. As an Associate Professor at the University of Copenhagen, his research interests include economic growth, political development, agriculture, technology diffusion, structural transformation, and economic history. He is currently working on research projects focusing on the anatomy of empires and agricultural technologies as climate change mitigation.

CONTACT

E: amw@econ.ku.dk

W: sites.google.com/site/asgerwingender

T: @AsgerWingender

FUNDING

Dr Hariri gratefully acknowledges support from the Danish Council for Independent Research under its Sapere Aude programme for the research presented here.



Professor Jacob Gerner Hariri
University of Copenhagen
Copenhagen
Denmark

Dr Jacob Gerner Hariri holds Bachelor degrees in both in Economics and Political Science and completed his MSc in Political Science in 2008. After a periods as visiting scholar at both Harvard University and New York University, he obtained his PhD in Political Science from the University of Copenhagen in 2012. He is currently a Professor of Comparative Politics in the Department of Politics at the same university. His research interests include state formation, democracy and democratisation, political regimes, and, more generally, political and economic development over the long run. He is currently working on a collaborative research project on the anatomy of empires.

CONTACT

E: jgh@ifs.ku.dk

W: politicalscience.ku.dk/staff/Academic_staff/?pure=en/persons/196635

FURTHER READING

JG Hariri, AM Wingender, [Jumping the Gun: How Dictators Got Ahead of Their Subjects](#), *The Economic Journal*, 2023, 113(650), 728–760. DOI: <https://doi.org/10.1093/ej/ueac073>

JG Hariri, AM Wingender, [Arms Technology and the Coercive Imbalance Outside Western Europe](#), *The Journal of Politics*, 2023 (pre-print). DOI: <https://doi.org/10.1086/727726>

