

August 16, 2021

Data and Geopolitics: Part I

For decades now, the post-industrial “information age” has been a key topic of interest for economists, business leaders, financial managers, and investors. All have come to appreciate the implications of silicon-based semiconductors and the opportunities they create for mass data management, storage, communications, and analytics. In recent years, data has also become a major concern for governments. In Part I of this report, we discuss why political leaders are now paying closer attention to the control of data and information, and what that means for geopolitics. In Part II next week, we will show how governmental control over data and information is playing out in China, in particular, and conclude with the ramifications for investors going forward.

Why Governments Care About Data

In a recent [Weekly Geopolitical Report](#) published August 2, 2021, we took a broad look at how political leaders and countries build influence or political power and the resulting effects on geopolitics.

In this section, we focus specifically on “information power,” which underlies several of the sources of influence we described in that earlier *WGR*. Our view is that modern information power has arisen from advances in data technologies over the last several decades. Those advances have allowed political leaders and governments to

greatly expand their use of information in four particular ways.¹

Wealth Creation. The most obvious way governments have expanded their use of data and information is by supporting, encouraging, guiding, and taxing those companies (usually private) that are at the forefront of acquiring, processing, or using data. Cultivating companies that are based on data and information harkens back to the way governments supported oil companies over the last century, when energy resources were seen as an essential determinant of national power. Indeed, some observers now consider data and information to be the “new oil” because it is so essential to economic growth and has created so much wealth that governments can then capture via taxes. Reflecting the vast wealth created by these firms, the Information Technology and Communication Services sectors together account for almost one-third of today’s global stock market capitalization, based on the MSCI All Cap World Index (see Table 1 below). As of mid-2021, nine of the 10 companies with the world’s largest stock market capitalizations were in the Information Technology and Communication Services sectors.

Communications. Recent information technology advances like the internet, cellphones, and related technologies have revolutionized the speed, scale, and scope of

¹ This section is based on the following publication: Rosenbach, Eric, and Mansted, Katherine. (2019). [The Geopolitics of Information](#). Cambridge, MA: Harvard Kennedy School, Belfer Center for Science and International Affairs.

people’s ability to communicate information. As a result of that, commercial firms have better access to competitive business information and can more easily take advantage of international trade and investment opportunities. The resulting increase in their profitability feeds into the wealth creation discussed above. Just as important, another result of improved communication is that advanced military forces have new abilities to understand the battlefield and their adversaries, to coordinate disparate forces into more powerful fighting organizations, and to protect their own information and communications.

- Naturally, better use of data and information can enhance a state’s military or police power. Such data and information prowess has been key to making the U.S. military the preeminent force in recent decades.
- Communications may become even more important in the future as the U.S. military seeks to retain its competitive edge through new warfighting concepts like “[distributed lethality](#),” i.e., relying on large numbers of relatively inexpensive, dispersed weapons platforms such as drones and small, unmanned ships rather than concentrated groups of big, expensive systems like aircraft carrier strike groups. Controlling and coordinating widely dispersed weapons such as drone swarms will require secure, reliable communications systems with the ability to function across broad swaths of the earth.

Influence. Propaganda, political messaging, and electoral advertising have all existed in one form or another for millennia, and governments have probably used disinformation against their enemies for

centuries. It therefore should be no surprise that political leaders and governments are leveraging digital networks and social media platforms to increase the scale, scope, and reach of state influence operations. [The main recent example of this was Russia’s disinformation campaign in the 2016 U.S. presidential election.](#) Going forward, experts believe that advances in automation and artificial intelligence will allow governments to adopt “self-driving” influence campaigns at home and abroad. These new influence campaigns could be much more effective than ever before because they will be automated, continuous, micro-targeted to those individuals most susceptible to manipulation, and constantly improved based on real-time digital feedback. The computer programs running them could even be used to cheaply and quickly generate “deep fake” audio and visual material to make them even more effective.

Table 1

iShares MSCI ACWI ETF (ACWI)	
Sector Allocations at 6/30/2021	
Source: iShares by BlackRock	
Sector	Share
Information Technology	21.8%
Financials	14.0%
Consumer Discretionary	12.7%
Health Care	11.5%
Industrials	9.8%
Communication Services	9.4%
Consumer Staples	6.8%
Materials	4.9%
Energy	3.4%
Utilities	2.6%
Real Estate	2.6%
Cash and/or Derivatives	0.4%
Total	100.0%

Decision-making. Because of widespread computerization since the beginning of the information age, it may be tempting to think technology has already revolutionized decision-making for governments, companies, institutions, and individuals. A

certain level of improvement has, indeed, occurred. However, the improvement has probably been less than perceived, given that full utilization of information requires a certain balance between the amount of data available to be analyzed and utilized versus the computer processing power and machine learning required to exploit that data. The ability to generate data has long outstripped the ability to economically make use of it. What's different now is that today's advanced computer processing power and artificial intelligence capabilities are finally eliminating the "information overload" problem.

- In fact, machine learning systems work best when they have more data available to crunch. That's because these systems don't just analyze huge amounts of "training" data. Once they recognize patterns in that data and use inference to make decisions based on that data, they then use ongoing "feedback" data to refine their algorithms over time and produce even better decisions.
- Political leaders and governments therefore have recognized the importance of generating and capturing even more data, not only by the private sector (especially if its data is made available to the government), but also by government itself. [One good example of this is China's mass deployment of surveillance cameras](#) and efforts to monitor individuals' financial transactions. Another development in the future will probably be "smart city" grids that track individuals' activities.
- Historically, perhaps the major advantage for free-market economies was that private firms dispersed throughout the economy have been better able to process the enormous amounts of information about their

markets. Price signals have produced much better economic decisions than central bureaucrats in socialist economic planning ministries. However, with advanced artificial intelligence and the ability to centrally capture data from throughout the economy, socialist or communist governments now could be in a position to make much better economic decisions than ever before.

How Governments Are Responding

Now that political leaders and government officials around the world recognize how data and modern information technology can enhance their power, they are changing their behavior in several ways. For example, they are starting to treat all kinds of information as potentially strategic, whether it's the intellectual property of national companies, the personal financial or health data of its citizens, or the same types of data related to foreign companies and individuals. On top of that, political leaders and companies today are taking stronger steps to protect and control their country's governmental, corporate, and individual data in order to keep it from falling into foreign hands. Of course, the corollary to that is that some governments are boosting their efforts to steal foreign information directly, or with the collaboration of their country's companies or criminals.

Within authoritarian governments, this drive to protect and control the nation's data environment can be seen in digital censorship. China was an early mover in this regard, and it has become famous for its stringent, highly effective "Great Firewall" that keeps unwanted information unavailable to Chinese internet users. Russia has also taken steps to hermetically seal off its internet from foreign information.

Now that countries understand the importance of generating, using, and controlling vast amounts of data, another obvious response is more offensive in nature: now and in the future, we expect to see more and more governmental attacks on other countries' data and data integrity. Just as traditional espionage focused on stealing data and information from abroad, governments will keep trying to acquire foreign digital data and information. Given that machine learning systems like artificial intelligence require mass amounts of "clean," reliable data, we also expect states to launch more "food poisoning" attacks against their adversaries' data, perhaps by deliberately corrupting foreign databases with false or unusable data.

Part II

This overview of the geopolitics of information is necessarily high-level and largely abstract. Therefore, to highlight some of the concrete ways that a government can react to the new information age, and to illustrate what is perhaps the world's most focused data and information strategy, Part II of this report will take a close look at China's current industrial policy and how it is actually an all-encompassing data and information strategy. We will also examine some of the key investment ramifications of this new type of industrial policy.

Patrick Fearon-Hernandez, CFA
August 16, 2021

This report was prepared by Patrick Fearon-Hernandez of Confluence Investment Management LLC and reflects the current opinion of the author. It is based upon sources and data believed to be accurate and reliable. Opinions and forward-looking statements expressed are subject to change without notice. This information does not constitute a solicitation or an offer to buy or sell any security.

Confluence Investment Management LLC

Confluence Investment Management LLC is an independent Registered Investment Advisor located in St. Louis, Missouri. The firm provides professional portfolio management and advisory services to institutional and individual clients. Confluence's investment philosophy is based upon independent, fundamental research that integrates the firm's evaluation of market cycles, macroeconomics and geopolitical analysis with a value-driven, company-specific approach. The firm's portfolio management philosophy begins by assessing risk and follows through by positioning client portfolios to achieve stated income and growth objectives. The Confluence team is comprised of experienced investment professionals who are dedicated to an exceptional level of client service and communication.