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Measuring the Power of Non-State Actors against State Power:
Presenting a New Non-State Actor and Nation-State Power Index

by

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Measuring the Power of Non-State Actors against Nation-State Power:
Presenting a New Non-State Actor and Nation-State Power Index
Dissertation Abstract--Idaho State University (2023)

This dissertation examines the growing power of non-state actors, particularly multinational corporations, and its implications for global power relations. While nation-state power has long been the dominating source of international power, the rise of non-state actors in recent years has led to a shift in global power dynamics. With their vast wealth, big data, social influence, and algorithmic manipulation, non-state actors such as Meta Platforms (formerly Facebook) are becoming substantial forces in shaping the world's political and economic landscape. However, current measurements of world power are lacking in terms of comparing nation-state power with non-state actors' power. Traditional measurements primarily focus on military and economics, leaving out newer types of power such as data and technology, which can be misleading when assessing non-state actors' power.

This dissertation aims to examine non-state actors' power by using a traditional global power measurement tool, the Asia Power Index, to analyze the power of a multinational corporation, Meta Platforms. The research questions focus on the ways in which non-state actors are transforming traditional notions of power and challenging the dominance of nation-states, as well as how to develop a power index that can measure both non-state actor and nation-state power. The ultimate goal is to open a discourse on measuring non-state actors as top world power-holders and to suggest how current measurement systems can better include non-state actor's power. As the world becomes more interconnected, it is essential to reassess our understanding of world power and develop new tools to measure and comprehend the evolving nature of power relations.

CHAPTER 1 Introduction and Significance

“A handful of Big Tech corporations now wield more power than most national governments. It's time to subject them to democratic control – before their power erodes democracy” (Fernandez et al., 2021, p.1).

The growing power of non-state agents has become a concern for nation-states and zpower nation-states, namely the US, China, and Russia. However, the topic of non-state agents in this context is seldom addressed. It is possible that some non-state actors wield more power than the majority of nation-states. It is difficult to ascertain the extent to which certain non-state actors wield power, especially in comparison to nation-states, due to the scarcity of concrete data and consistent measurements of non-state power. National power has long been the dominating source of international power. However, it is visible that nation-states' power has been compromised by other powerful entities in international politics. Today, there is an emergence of non-state actors, such as multinational corporations, amassing huge amounts of non-traditional power, composed of vast wealth, big data, social influence, and algorithmic manipulation, and other forms of power. The current shift in global power dynamics may lead to a transformation of the international system, and this shift is strongly influenced by advancements in technology.

With its vast reach and influence, Meta Platforms, along with other technology giants such as Google and Amazon, has increasingly become a significant force in shaping the world's political and economic landscape. These rising powers have not gone unnoticed, especially considering published headlines about Meta Platforms such as, “The Sovereign State of Facebook vs. the World” (Rosenberg and Fischer, 2021), “Mark Zuckerberg Runs a Nation-state, and He's the King” (Farrell et al., 2018), “Facebook Is Now Bigger Than The Largest Country

On Earth” (Stenovet, 2017). However, just pointing out the growth or threat of non-state power is not enough. How do we ascertain the magnitude and impact of this power?

These shifts in power dynamics raise important questions about the traditional methods used to measure and understand world power. As we move forward into the future, it is essential to reassess our understanding of world power and develop new tools to measure and comprehend the evolving nature of power relations in our increasingly interconnected world. Currently, non-state actors’ power is being overlooked in traditional measurements of power, which is problematic.

Scholars need a sound way to measure power, because the balance of power is the motor of world politics, playing a role as central as the role of energy in physics and money in economics, and serving as a key variable in seminal theories of war and peace, alliance politics, international cooperation, state building, trade, nuclear proliferation, and democratization. Policymakers, too, need an accurate way to gauge the power of nations, because vital decisions regarding grand strategy, alliance commitments, economic policy, military procurement, and the use of force hinge on estimates of relative power. (Beckley, 2018 p. 7-8)

Significance

In order to understand if non-nation state power is competitive with nation-state power, we need to accurately assess non-nation state power. Research and methods are lacking in terms of comparing world power between nation states and non-nation states. Traditional measurements of world power, most often world power indexes, have primarily focused on the influence of nation-states with a heavy focus on military and economics but leaving out new types of power such as data and technology, making it easy to miss important sources of growing non-nation-state power. The rise of non-state actors such as Meta Platforms is highlighting the need for a new approach that takes into account the changing dynamics of global power.

This dissertation uses a traditional global power measurement tool, the Asia Power Index, to examine the international power of a non-state entity, Meta Platforms (formerly Facebook), in order to show an example of the types of non-state power that are overlooked, what new types of power exist, and to suggest how to adjust current measurements systems so they can better include non-nation states and their power.

Specifically, this dissertation aims to examine the growing power of non-state actors, particularly multinational corporations, and its implications for global power relations. It explores the ways in which these actors are transforming traditional notions of power and challenging the dominance of nation-states. The study focuses on measuring world power, ultimately developing a power index intended to measure both non-state entity and nation-state power alike, especially for purposes of comparing non-state power against nation-state power.

In order to investigate the power dynamics of non-state actors in contrast to that of nation-states and create a suitable power index for evaluating both against each other, the following section lays out the research questions that are addressed.

Research Questions

This dissertation asks how non-nation states rate, when compared with nation-states, in calculations of national world power, especially considering changing sources of power enabled by technology. Meta Platforms is used as a case study to examine this question. In order to answer this question, the following research questions are examined:

Research Question 1 (R1): How does Meta Platforms rate in calculations of national world power if compared to nation states today?

Research Question 2 (R2): What types of power help non-nation-states, such as Meta Platforms, compete with nation-states?

Research Question 3 (R3): What power exists within Meta Platforms that is stronger than what the nation states have?

Research Question 4 (R4): What would an accurate power index calculation for non-nation states and nation states alike look like?

To begin, Chapter 1, Introduction and Significance, has introduced the topic of measuring non-state power and the importance of developing a tool to measure this power.

Chapter 2, Literature Review, outlines how international power has been conceptualized theoretically since the beginning of the nation-state system. This chapter examines prevalent theories that classify attributes of the international system in terms of what constitutes international power, as well as the key actors who wield this power.

Chapter 3, Background, examines the transformation of global power and the configuration of the international system before and after the nation-state system, with a focus on the post-nation-state era. This encompasses an exploration of the factors that led to the build-up to state power, and how state power has changed over time.

Chapter 4, Measuring World Power, scrutinizes common ways that world power is measured currently. These measurements, often in the form of power formulas and power indexes, are predominantly focused on nation-states. In this chapter, the inadequacy of power metrics for non-state actors is elucidated, and a state-centric power index that may be adapted for non-state actors is proposed.

Chapter 5, Methods, details the methods used to answer the four research questions of this dissertation, including a description the power measurement tool used to answer specific

research questions, rationalization for its use, details on data collection, and methods for scoring in the application of the Asia Power Index to Meta Platforms.

Chapter 6, Results for RQ 1-3, presents the outcomes of the first three research questions of this dissertation. The findings furnish insights into how Meta Platforms compares to nation-states using a power index that is centered on the nation-state framework. Furthermore, the results shed light on the various types of power that non-nation-states wield, such as substantial wealth and resources, non-territoriality, and cutting-edge technology, which enables them to compete with nation-states for global influence.

Chapter 7, Results for RQ4, is dedicated to presenting the outcomes related to the fourth research question of this dissertation, the presentation of a new non-state and nation-state power index. This new index presents a solution to a fundamental problem within the scope of this dissertation's subject matter - the lack of suitable measures to evaluate the power of non-nation-states vis-à-vis nation-states.

Finally, Chapter 8, Discussion and Conclusion, provides a synthesis of the outcomes from the research questions, highlighting multiple key findings that show the significance and impact of this work. This chapter concludes by noting that because global power is changing, where competitive world power is now originating from non-state actors, our approach to assessing power ought to progress in tandem with the transformation of real-world power dynamics. This chapter also offers suggestions for future exploration of this topic.

Overall, this dissertation seeks to open the discourse on the need to consider non-state actors as top world power-holders and to appraise their power in a more systematic, meticulous, and substantial manner. The findings of this research provide a compelling argument for policymakers and scholars to acknowledge the role of non-state actors in shaping the world order

and to devise new strategies to engage with them effectively. It is hoped that this work will spark further research and discussion on the role of non-state actors in shaping the future of the international system.

CHAPTER 2 Literature Review

Introduction

International power has been theoretically conceptualized in a variety of ways since the beginning of the state system. Being examined are popular theories which categorize features of the international system in terms of what constitutes international power, as well as which type of actors or entities primarily hold this power. This chapter will cover classical realism, liberalism, neorealism, neoliberalism, interdependence, constructivism, and technopolitics. Although seemingly chronological, it is important to note that these theories, whether older or newer, are known to come in and out of fashion, become integrated with and complement one another, and generally all hold many elements of value and relevance today.

World Power Theory

Explaining world power can be challenging and trends in conceptualizing what world power is have changed over time. The power of an international actor can be defined in countless ways and is often hard to measure, as Beckley (2018) notes that, "...power is largely unobservable and context dependent" (p. 8). It is no wonder that numerous theories have emerged over the past two millennia (Silverstone, 2022). Traditional aims at measuring international power are largely aimed at nation-states' military and economic assets—characteristically realist and neorealist perspectives at assessing power.

Since the time of Thucydides in the 400 B.C.s, where realism, one of the first well-known theories of international relations came about (Silverstone, 2022), and up until today across numerous theories of International Relations such as constructivism, power has changed in definition from a measurable, tangible feature like military to an incalculable, abstract collection of features such as ideas, identities, and elitism. However, current tools to measure international

power have not adapted enough to support current theory involving non-state actor's power and new technology. International calculations of power should not only aim to measure what is easy to measure. Early approaches to measuring world power, such as classical realism, tend to focus on calculating tangible power such as military force. Some newer theories have indeed developed more nuanced measurements of power, such as liberalism's calculations of alliances and cooperation, or constructivism's acknowledgement of ideas holding power. These later conceptualizations of power may prove more difficult to tabulate than the number of weapons or soldiers, however, today's efforts of measuring world power still fail to include important power-holding notions in the international system. The following walks through how power is conceptualized from 400 B.C. to present day in order to elucidate how power is currently being measured (or not measured, if one can extrapolate from there).

Examining the definition of power from theories of international politics, we can see a shift in definitions. Beginning with classical realism, and working through neoliberalism, and constructivism provides an overview of how the concept of power has changed over time and varies among scholars. For classical realism, power is quite singularly defined as military, and the definition of power progressively evolves as it gains new companions, such as economics, prestige, technology, alliances, cooperation, institutions, norms, and then anything at all.

Classical realism generally describes power as military power. Its concerns surround security, focusing on issues of conflict and war and resolving those issues. Thucydides' Melian Dialogue depicts a realist vs idealist struggle, aiming to show that power (mainly physical) will succeed over good intentions or morals (Thucydides, Warner and Finley, 1972). He shows that power is most efficiently as military force. Machiavelli echoes this sentiment, explaining that fear is stronger than love, able to break apart bonds whenever the "selfish" human finds that

creating fear and punishment can serve their purpose. He maintains that fighting by force is the ultimate power and is sometimes the only means to achieving a goal. Morals are not taken into account, and in his words, “the ends justify the means”, (Machiavelli, 2002, p. 46). Hobbes assumes that the state of nature is anarchy, which necessitates war—there is a constant desire for power, and when one has power, others will want to take that power from them. He contends that power as military force is what is most efficient (Hobbes, 2002). Morgenthau explains that we have to work with, not against forces inherent in human nature. In a world of opposing interests and conflict, states act for power over others, and this power is military (Morgenthau and Thompson, 1993). Carr points out that in the international world, there is no organized power, and thus no natural harmony of interests. In this anarchic system, it is the powerful, prosperous, and privileged who make the rules. The state of nature is a state of war (Carr, 2002).

These authors outline important features of realism: the strongest, most efficient type of power is through force; power does not need to include morals; humans are selfish and will betray one another; the ends justify the means; the state of nature is anarchy (and the international world is anarchic); and there is a constant desire for power, which creates conflict. Under the realist tradition, power is measured through force, which can mostly be translated as military force. We can also see that realism assumes the international world is anarchic, where rules are not truly enforceable—but military force can be coercive.

Table 2.1 Classical Realism Summary

Classical Realism
Definition of Power: Military Force
Main Actor: Nation-States

Another cornerstone theory, Liberalism, was a response to realism with a more idealistic, optimistic view of international relations. Liberalism's conceptualization of power was less focused on military and force, and more focused on the power of cooperation and alliances. Liberalism focused on how cooperation can help achieve goals best (especially long-term goals) and that cooperation helps prevent conflict. Additionally, there can be multiple winners in the system. Under liberalism, and similar to realism, the nation-state remains the main actor and power-holder. Jervis (1999) notes specific benefits of working together, including avoiding harm and gaining more through cooperation. Likewise, Kant (1991) suggests that states should avoid war, respect each others' sovereignty, abandon armies, and aim for world citizenship and hospitality. This contrasts with realists' heavy emphasis on physical capabilities being the strongest representations of power. Under liberalism, power is seen as gained from the exchange of information, cooperation, competition, and capitalism. There is a real move from power being seen as capability-based to power now being something gained through negotiation and bargaining. Under this theory, things besides physical power can encourage states to work together.

Table 1.2 Liberalism Summary

Liberalism
Definition of Power: Alliances and cooperation
Main Actor: Nation states

An update to realism and a clap-back to liberalism comes the theory of neorealism, where the definition of power extends just slightly beyond military power. Neorealists, like Kenneth Waltz

(1954) added economics to the definition of power. Waltz contends that realism is still a valid approach, because the international system has not changed—the international system is still anarchic. He acknowledges that there have been vast changes within the unit level of the international system, such as those of transportation and communication, but that this has not changed the anarchic structure of the international system overall. Furthermore, Waltz argues that instead of realists' claims that conflict arises from human nature, Waltz argues that conflict instead comes from the international system. This system still functions under a belief that cooperation is not possible and gains are relative. We see then that neorealism's definition of power is military and economics, with the nation-state continuing to be the main actor.

Table 2.3 Neorealism Summary

Neorealism
Definition of Power: Military and economics
Main Actor: Nation states

A coalescing of ideas between neorealism and liberalism resulted in neoliberalism. These ideas include the suggestion that there is something naïve about realism, which is the supposition that states are constant in type and size within an international system. An additional suggestion that separates from the theory of realism is that power can also be prestige and wealth, not just military (Gilpin, 1981).

Neoliberalism still contends that the international system is anarchic, but that it is constrained by institutions and structures. Neoliberals found that realists' definition of power was still too limiting in theoretical reach (Keohane, 1984). They criticized that realists did not consider the role institutions had in international relations. Although non-hegemonic cooperation could be

difficult because of different interests among states, states should realize that institutions help create cooperation, which in turn allows the states to better pursue their own interests (Keohane, 1984). Under institutionalism, cooperation, sharing information, alliances, and institutions provide a strong formal structure that minimizes problems between states. Under institutionalism, institutions are seen as powerful as they increase cooperation, and they are conceptualized as both the causes and effects of state choice (Martin and Simmons, 1998). Under regime theory, regimes are seen as state-constructed arrangements that create expectations concerning a state's behavior on various issues. Regimes constrain and influence behavior of states toward one another. Regime theory includes a big focus on collective security and expectations of behavior (Kratchowil and Ruggie, 1986). Neoliberalism is also composed of concepts involving game theory. Examples in game theory can illuminate how states can indeed benefit from working together, where changes in payoff, number of players, and iterations affect whether or not cooperation is beneficial. Additionally, game theory can emphasize how reciprocity is a big reason why cooperation usually prevails, where multiple iterations entice cooperation (Oye, 1985).

Under the theory of interdependence, a branch of neoliberalism, politics is no longer just explained by a balance of power because we are now too interconnected and too interdependent (Keohane and Nye, 2012). Interdependence involves factors such as economics, communications, and human aspirations. Interdependence posits that multiple channels connect societies, there is not a hierarchy among issues, and military force has a minor role in non-security goals. The absence of hierarchy among issues theorizes that interstate relationships involve multiple issues which are not arranged in clear or consistent hierarchy (so for example, military security has a minor role and does not always dominate). Interdependence theory allows

us to address more clearly the “Information Age” and the interconnectedness that technology brings the international world (Keohane and Nye, 2012). According to interdependence, the world is too interconnected and interdependent to be explained by simple power balance, where economics, communications, and human aspirations should be incorporated into the definition of power. Additionally, the elasticity of borders and the change that technology has brought on can further expand interdependence’s theoretical reach (Keohane and Nye, 2012). States gain and maintain power through creating common institutions, developing shared identities and loyalties, and coordinating policies.

Neoliberals emphasized the power of cooperation as a means to appease the many interests of the world without the need of hegemony. In Neoliberal theory, power is a structural characteristic of inter-state relations, where power can be seen as alliances, cooperation, technology, institutions, communication, human aspirations, common institutions, and norms more than military or economics. This means that the reach of the theory also expanded, recognizing that main actors did not just have to be nation states, but could also be institutions. These concepts as power structure anarchy by guiding choices that states make.

Table 2.2 Neoliberalism Summary

Neoliberalism
Definition of Power: Alliances, Cooperation, Economics, Communications, Human Aspirations, and Coordinated/Common Institutions, Norms
Main Actor: Nation states, but non-state actors, like regimes, institutions, transnational organizations also matter

Constructivism is considered more of an approach than a theory, as it is seen as a can be applied to multiple theories of IR and considered a philosophy of social science in general (Spindler, 2013). Constructivists found that definitions of power and the reach of previous

theories of international relations were inadequate. Constructivism defines power in more abstract terms, which can change wildly from situation to situation. There are many strains of constructivism, but they all find common ground in that ideas, identities and interests are more powerful than material forces (Wendt, 1999; Hopf, 1998). Instead of power arising from the nature of man, it forms through shared ideas and these ideas are usually from the elite (Wendt, 1999). Ideas and identities are thought of as more amenable to persuasive measures such as socialization, than to coercive measures (Checkel, 2001). Constructivism also highlights the concept of norms as power, where norms are not directly observable so we must infer them from behavior (Finnemore and Sikkink, 1998). The reach of this theory expands to allowing nation states, elites, and institutions to be main actors. Importantly, constructivism focuses on intersubjectivity and social context. All actors and perceivers interpret meaning of the world through social and cultural context—their own identities, others’ identities, norms, others’ actions, social practices, etc.—these all provide the context for which meaning is derived (Hopf, 1998; Spindler, 2013). Where neorealism and neoliberalism find the strongest world power to be through material things such as military or economics, constructivism finds that power can be found equally as substantial through the abstract—knowledge, ideas, language, culture, and more (Hopf, 1998). Expectations built through practices, norms and identities can help reduce uncertainty. Embracing intersubjectivity and aiming to understanding others helps obtain predictability through patterns of action (Hopf, 1998).

Table 2.3 Constructivism Summary

Constructivism
Definition of Power: Anything / situational/ non-hierarchical
Main Actor: Nation states, non-state actors, elites, institutions, transnational organizations

Technopolitics

Where constructivism is an approach that allows for power to be socially constructed through ideas, knowledge, identities, cultures, and more, technopolitics provides an application of a power niche, where the culture, ideas, knowledge, and identities around technology and politics hold and reinforce power.

Technopolitics

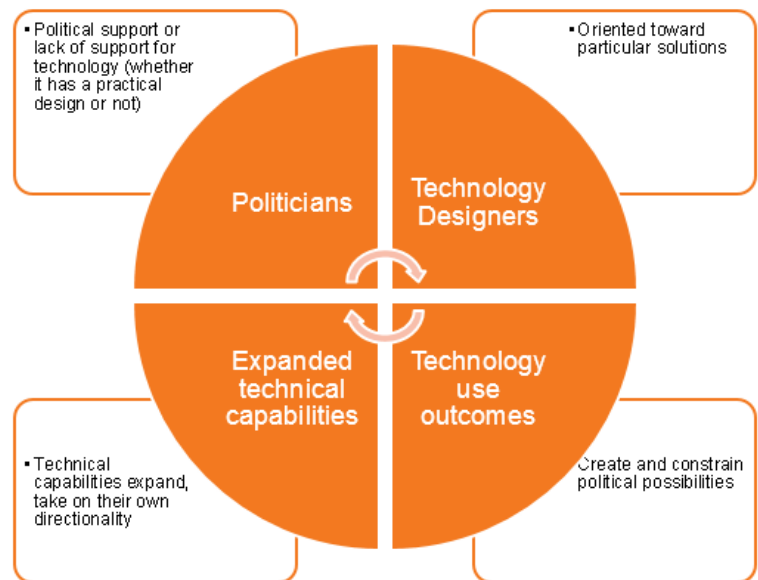


Figure 2.1 Technopolitics Cycle

Technopolitics is seen more as an approach, related to constructivism.

Today's power is notably different than power in the past, where technology is playing a much larger role in what is considered powerful, and how we describe power. For example, there is a large shift in power from traditional political institutions, like states, to private actors involved in the technology industry, such as multinational corporations. As such, technopolitics is key to a discussion of power concerning non-state actors.

Filling the void between technological determinism and social constructivism is the technopolitics (or techno-politics) paradigm (Mayer et al., 2014). A contemporary, rapidly developing, and broad approach which is multidisciplinary and pulls from the field of science and technology studies (STS), technopolitics moves to examine technology as an integral piece of politics, rather than external to politics (as the previous theories of realism, liberalism, and constructivism have done). Technopolitics involves using technology to achieve political goals

(Hecht and Edwards, 2010). Technopolitics is often explained as a process or cycle of mutual orientation of humans and technology, where political actors work with technology or engineers that design technology to solve a problem. In this cycle, both sides will orient one another to particular solutions—expanding or constraining options for political solutions. Some technology gains exceptional backing and resources, whether it is most effective or not, through political support, while other technology that is lacking political support becomes seen as unusable (whether or not it actually is useable or effective). This large commitment of resources toward a technology can propel it forward and the technology can take on its own directionality. This process of technology growth and specialization through support by politicians seeking to achieve political goals can be difficult to predict, and “Very often, if not always, neither politicians nor engineers foresee the full implications of this process, which we call “mutual orientation” (Hecht and Edwards, 2010 p. 7).”

Figure 2.1 depicts the cyclical process of technopolitics. This approach, like constructivism, is non-deterministic, but unlike constructivism, allows emphasis on non-human agency (usually from socio-technical systems) in politics. Technopolitics finds that politics and technology are continually structuring each other (Eriksson and Newlove-Eriksson, 2021). Hecht and Edwards (2010) explain that, “..., devices, institutions, and altered social relations form a complex sociotechnical system, where causal relationships look more like mutual construction than like technological determinism” (p. 274). Technopolitics is popular among multiple disciplines, but there have also been efforts to create a technopolitics sub discipline in International Relations (Eriksson and Newlove-Eriksson, 2021). Advocates of technopolitics argue that technology is seen as too exogenous to international relations theory and that this view needs to change. Technology is at the core of international relations, where, “... technology itself

increasingly becomes the contested terrain on which security, economic and identity struggles play out" (Fritsch, 2014, p. 115). There is a gap in International Relations literature concerning the role of technology in world power and politics, and in acknowledging that technology possesses abilities greater than human abilities, it is important to turn our focus on the great international power that technology can harness (Hoijsink et al., 2019). Technology is only becoming more prominent and is now entangled in all aspects of world politics. Mayer et al. (2014) propose adopting technopolitics into International Relations topics and theories as they explain, "By adopting the notion of techno-politics, we argue that it is neither sufficient to treat sciences and technologies as external to "social" relations, nor as dominating human behavior and determining political outcomes. We propose rather to open up a middle zone in order to study the intersection of science and technology with international and global affairs" (Mayer et al., 2014 p.1). Technopolitics, featuring the current and potential use of technology, is a key factor in examining power in our contemporary world.

The technopolitical approach helps focus and augment the attention to science and technology (Mayer et al., 2014). Technopolitics often includes the assemblage approach, which focuses on "...large-scale socio-technical systems, also called 'assemblages'" (Eriksson and Newlove-Eriksson, 2021, p. 14). These assemblages can be infrastructures or networks, such as the internet, algorithms, or artificial intelligence (AI). Technopolitics reignites the agent-structure debate, revealing that these assemblages can be important wielders of power (Mayer et al., 2014). This approach reduces the overarching importance of the state in terms of wielding power. Technology and its assemblages span across the world as infrastructure, technical systems, economic systems, production and trade, weaponry, and more. These assemblages are more complex, powerful, and interconnected than is possible to conceptualize in the state-centric

system (Mayer et al., 2014, p. 20) Under this paradigm, power moves from being a human-directed, state-centric thing to something that can be wielded by non-humans in decentralized or centralized manners, involving or not involving the state.

Oakes (2021) notes that through the lens of technopolitics, power comes from a Foucaultian concept of the dispositive, or apparatus, where power stems from an interdependent network, or, "...a heterogeneous ensemble of diverse elements consisting of, among other things, 'discourses, institutions, architectural and technical forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions' (Foucault, 1980: 194)" (p. 284). This power can be composed of nonhuman and immaterial as well as human and material sources.

Table 2.4 Technopolitics Summary

Technopolitics
Definition of Power: technology and its assemblages, social constructs that enhance technology's use
Main Actor: Human & non-human entities, non-state actors & nation-states, whoever uses technology, technology itself (and its assemblages)

This chapter has examined prevalent theories in International Relations concerning features of international system, focusing on what constitutes international power and the actors or entities assumed to be holding that power. Theories examined include classical realism, liberalism, neorealism, neoliberalism, interdependence, constructivism, and technopolitics. To contextualize this theory on world power and provide for its application to the real-world, the next chapter will provide a brief background on world power before and after the nation-state system, including a focus on a decline in state-power and a rise in non-state actor's power.

CHAPTER 3 Background

Introduction

The shift in global power and the structure of the international system before and after the nation-state system is analyzed in detail in this section, with particular emphasis on the post-nation-state period. This involves a discussion of the build-up to state power, and how state power has changed over time. The world wars serve as delineators in state power trends and the overall balance of world power. Following this is a discussion of the more recent decline in state power and the increase in non-state actor's power, especially through multinational corporations who focus on technology. A description of multinational power is concluded by outlining one multinational technology corporation, Meta Platforms, which is featured as a case study for the purposes of this dissertation.

Background Introduction

Technological advancements, especially relatively recent advancements, have increased the interconnectivity across the world, forever changing international relations. Through technology, globalization has created new connections and space-time compression where people can interact fluidly despite wide geographical and cultural separations. The world has become accustomed to the exponential acceleration of advances in technology from radio to television to the internet and artificial intelligence (AI). However, this ever-advancing technology is becoming harder to control and has altered the international system. Perritt (1998) notes how information technology has been disrupting sovereign power since the invention of the printing press, "...allowing the old political order to be challenged by new ideas and forces" (p. 426). He acknowledges that information technology can also be exploited to enhance sovereign power. However, the internet (and those infrastructures built upon it) with its ability to transcend physical and regulatory

controls, has created a freedom from sovereignty unlike previous technology. Perritt (1998) explains,

“Telephone technology has historically relied on physical circuits that are easily controlled at national borders. Television, the latest of the radical leaps in information technologies prior to the Internet, uses radio frequencies with relatively short range. Broadcast television is still predominantly national in orientation. Cable television likewise relies on physical infrastructure that is easily controlled at national borders” (p. 427).

The internet is composed of computer networks connected internationally. The physical and transitional nature and vastness of this technology makes it difficult for governments to impose controls. Where nation-states had better control over previous technologies, we currently see the struggles of controlling the internet and other new technologies, such as AI, algorithms, social media, satellites, data collection and what is done with it, etc. (Perritt, 1998; Bucher, 2012). These new technologies threaten nation-states ability to harness and wield power and enable non-state actors to amass more power. Power in the nation-state system has changed dramatically since the establishment of nation-states to the current day’s technologically-entwined nation-states, as will be explained in the next sections.

World Power Before and After the Nation-State System

Since the Peace of Westphalia in 1648, the modern nation-state system has been the core wielder of world power. Previous to the Westphalian system (the early middle ages up to around 1648), world power was wielded through empires (mainly throughout much of Europe). Instead of today’s nation-states conducting power within their borders, dynasties in Europe concerned themselves less with territory, and more with which people, cities, and religions they had power over. Over time, power became more associated with territory as it was related to state legitimacy and sovereignty (Haselsberger, 2014; Laine, 2015). This increased attention toward territory was compounded by the conclusion of two extended disputes in Europe: the Thirty

Years' War (1618-1648) and the Eighty Years' War (1568-1648); both of which were ended by the Peace of Westphalia in 1648 (Laine, 2015; Brunet-Jailly, 2005). The Peace of Westphalia established the modern sovereign nation-state system in Europe where power and sovereignty were understood in terms of internationally-recognized agreements about state territory, and where the concepts of nation-states and nationalism flourished (Haselsberger, 2014; Brunet-Jailly, 2007). This nationalism, which gained enormous symbolic power for nation-states, was led by desires for self-determination and sovereignty and bound by politics, culture, and society (Laine, 2015; Kolossov and Scott, 2013).

Once the Peace of Westphalia added the concept of territory to political authority, state boundaries became crucial to state power. Boundaries distinguished between internal and external affairs, helping legitimate national legal jurisdiction, rights, and responsibilities. These boundaries also served as barriers, protecting the territorial state against external penetrations (Starr, 2006).

Acknowledging territory as a main component of sovereignty and power meant that borders around the world would be heavily contested and reshaped. From the Peace of Westphalia to the two World Wars, nations and their boundaries were generally unstable. Although Westphalian concepts were still generally adhered to during the Wars (sovereignty, non-interference of other states' affairs, acknowledging political territory, recognition of international law), territory and borders were constantly subject to conquests, and taking territory by force was considered a legitimate norm at this time (Kochin, 2018).

World War I

Power before the First World War was concentrated in empires. The First World War helped advance the process of contesting imperial domination. We saw the decentralization of

power take off as we saw world actors aim to redistribute the balance of power. There was a collapse of empires and an emergence of new dominant world actors, such as the USSR and Germany (Trojan and Nechaieva-Yuriichuk, 2020). The end of World War I left some leading world powers dissatisfied with the outcome of the war, ultimately leading to a renewal of territorial disputes, helping build up to World War II.

World War II

World War II led the world back to a consolidation of power. Germany, Italy and Japan aimed to expand their power through increasing territories and resources, but these state powers were quickly overshadowed. We saw world power move from a multipolar to a bipolar configuration, as the United States and Soviet Union emerged as the two great winners of the war and the two great international powers. The end of World War II led to the collapse of colonialism, with nationalism and its egalitarian principles taking the stage, and where even the two leading powers, the United States and Soviet Union, were claiming to be antiimperialist (Trojan and Nechaieva-Yuriichuk, 2020; O'Dowd, 2010). Not only was imperial domination no longer acceptable, but acquiring territory through force was also rejected (Kochin, 2018). The concept of an ideal nation-state was emphasized, where states and their borders claimed self-determination and sovereign authority over their territory.

After World War II, a new world order was founded on maintaining and managing power through international norms and regimes, namely the UN Charter, the Helsinki Final Act, and the Atlantic Charter (Kochin, 2018). These included topics of sovereignty, equality, and prohibiting the use of force against territorial and political independence. Prior to this, territorial conquests during wartime were considered legitimate. These post WWII agreements fortified state power through the inviolability of state borders and international respect for national sovereignty. Post-

WWII norms were generally respected universally, except for occasional challenges (i.e. Iraq's annexation of Kuwait under Saddam Hussein's rule) (Kochin, 2018).

The Cold War

During the Cold War, Westphalian norms of nation states respecting sovereignty and equality of other states and prohibiting use of force to gain territory continued. The concept of the nation-state took hold and symbolized freedom and self-determination. However, O'Dowd (2010) reminds us that this process of moving power from empires to nation-states was not clear-cut, where "... there is no sharp break between the age of empires and the era of nation-states.... The fact that of the 192 states currently registered with the UN, 127 have emerged since 1945 (Griggs and Hocknell, 2002) underlines how recent the globalisation of the national state has been" (O'Dowd, 2010, p.1043-1044).

The end of World War II, the Cold War, and the new nation-state system helped direct the world toward decolonization (Berger, 2001). Nation states were discouraged from having power over other nation states. The end of the Cold war, with its breaking down of the bipolar international configuration, led the world toward globalization (Trojan and Nechaieva-Yuriichuk, 2020). At this point, the world looked more like a unipolar system, with the United States' values, interests, military, and economic dominance leading the way (Fabbrini, 2009).

Post-Cold War & a Decrease in State Power

After the Cold war, increases in globalization, advances in technology, and economic and industrial development facilitated many changes in the international power structure. Multinational corporations and international institutions began to proliferate (Kolossoff and Scott, 2013; Laine, 2015; O'Dowd, L., 2010; Haselsberger, 2014). Since then, we have seen the power of capitalism and neoliberalism break down the constructs of state power (Melin, 2016).

As neoliberalism brought institutionalism to the forefront of the international scene, international cooperation further decreased nation-state power. Institutions such as the World Trade Organization (WTO) and United Nations (UN), international agreements such as the North American Free Trade Agreement (NAFTA) (now reconfigured and known as USMCA), and supra-state regions such as the European Union (EU) created a diminished sense of sovereignty and borders for nation-states (Melin, 2016; O'Dowd, 2010; Lester and Manak, 2018). These international institutions, which are still active today, have helped settle conflicts between states, allowed for mutually beneficial exchanges, helped prevent cheating, and created issue linkages. This has helped create a trajectory toward a system that is less focused on territorially-bound nation-state power, and more focused on multinational institutional power (Keohane and Nye, 2012).

In pondering power in a post-Cold War world, and potentially even a post-Westphalian world, we can ask if non-territorial actors are now outweighing the state. Keohane and Nye (2012) discuss how a post-Westphalian world means states no longer structure rules and norms and non-territorial actors such as NGOs and multinational corporations drive world order. Keohane & Nye (2012) argue that politics is no longer explained by a balance of power because we are now too interconnected and too interdependent. Interdependence is promoted by flows and exchanges of money, goods, people, and messages and this exchange is based on dependence and is often asymmetrical and based on power. Keohane & Nye challenge realist assumptions that states are dominant actors, that force is effective for achieving policy, and that there is a hierarchy of issues headed by military security. Instead, they describe three characteristics of Complex Interdependence, which contradict the three realist assumptions: there are multiple channels which connect societies, there is not a hierarchy among issues (military

security is not always the top of the hierarchy), and that military force has a minor role in non-security goals.

However, Keohane and Nye (2012) are not so ready to assign the world to a post-Westphalian order where states no longer matter. They argue that non-territorial actors are still not outweighing the state. They provide examples that states are still imposing rules on non-state things, such as cyberspace. States still structure rules and norms. In addition, there are still military tensions and conflicts happening outside of the democratic zone of peace. Complex interdependence is not happening everywhere and there are still a lot of realist tactics happening in the world, such as military force. The authors argue that states will continue to moderate the global situation, explaining that "...as long as globalization continues, states and other actors will find that their own values are increasingly affected by the actions of others. They will therefore seek to regulate the effects of interdependence: that is, to govern globalization" (p. 254).

Other scholars are more willing to challenge the idea that perhaps states no longer hold the most power, and no longer solely structure rules and norms of the international world. Laine (2021) explains, "While we cannot shut our eyes to the persistence of territorial borders, this kind of approach is very much needed in accentuating that the state is hardly any longer the only actor in the international society, nor is the nation-state the only conception of space to be applied in explaining human interaction (Laine 2016)". (Laine, 2021 p. 757). Widdis (2021) admits that the power of nation-states has been compromised by other powerful entities of globalization, but that nation states are still the most powerful agents in the international society as they adapt to globalization and use tools such as negotiation and regulatory frameworks to maintain supreme power. He explains,

“The state will continue to direct development, manage networks, and interpret and provide essential context for the new political, economic, and cultural realities of globalization. Indeed, the election of Donald Trump and his plans to reintroduce protectionism is evidence of the power of the state and the inevitability of borders. Furthermore, it may be the case that the current pandemic will create an environment that supports the reintroduction of borders of all kinds as well as reinforcing the power and sovereignty of the nation-state” (Widdis, 2021, p. 867).

Laine (2015) suggests that the breaking down of boundaries is contributing to a progressive build-up of power from non-state actors. He explains that, “... a feature of the last few decades (the post-Westphalian era) is that along with state elites, an increasingly active and influential role in the debate on the creation and destruction of symbolic boundaries is beginning to be played by a variety of non-state (supranational and sub-national) entities” (p. 43). As state boundaries diminish, state power does as well.

The many claims of neoliberals, concerning institutions, interdependence, and overall interconnectedness have indeed broken down state power. Today’s international system is moving away from a nation-state dominated system, where, although states may still be the ultimate power-wielder, their power is decreasing in a myriad of ways, and relatively quickly. Today’s cumulative power of non-state actors is a true threat to nation-state power, and in some cases, non-cumulative non-state actor’s power from single entities can supersede nation-state power. Globalization and technology will continue to break down the apparatuses that states have to wield their power.

Contemporary Decline in Nation-State Power

While states are still the center of our international system today, states’ powers have been consistently decreasing in multiple ways— both globally and locally— since the end of the Cold War. Engle explains this as a, “...transfer of state functions to supra-national institutions and the devolution of other functions of the state regional or local entities or even to private

actors (privatization). This double stress on the state, globalization and localization, diminishes the practical reach of the state in the lives of people” (Engle, 2004, p. 32-33).

Conventional military power, which was considered one of the most fundamental aspects of state power, is now considered by many to be a subsidiary power as national boundaries become more permeable and as the power of physical violence is surpassed by technological and economic powers (Engle, 2004). This argument is emboldened by the fact that technical and economic developments accumulate in ways that traditional military power does not—economic growth can compound and technological advancements can lead to exponential growth (Waltz, 1993). Waltz (1993) argues that economics and technology’s power have shown the ability to overtake military power for decades now,

“...with the use of military force for consequential advantage negated at least among nuclear powers, the more productive and the more technologically advanced countries have more ways of influencing international outcomes than do the laggards. America's use of economic means to promote its security and other interests throughout the past five decades is sufficient illustration. The reduction of military worries will focus the minds of national leaders on their technological and economic successes and failures" (p. 60).

Waltz (1993) provides more arguments for the dominance of technological and economic power in discussing how economic comparisons are often easier to make than military comparisons, “Militarily, one may wonder who is the stronger but, in a conventional world, will not find out until a war is fought. Economically, however, the consequences of price and quality differentials quickly become apparent" (p. 66).

Cohen et al. (2001) suggest that national power has been transformed fundamentally, where information technologies could replace traditional military power and weapons as they can lead to new types of warfare that alter the “...fundamental relationship between offense and defense, space and time, [and] fire and maneuver.”(p. 14). Alternative warfare could include attacking

non-physical infrastructures, power grids, economics or other critical networks that can cause equally (or more) devastating destruction than conventional military weapons.

Power through technology and economics can have huge space and time advantages over traditional military power. People (or entities) do not have to kill or be killed to show dominance, manipulate or coerce a target. Traces of technological and economic power and violence can be much more clandestine than military actions, especially where they are digital. Multiple targets across the world can simultaneously be assaulted in multifaceted ways. In addition, the physical resources used for technological and economic power (especially where digital) can be fewer than resources used for military power.

Buzan et al. (1999) explain how capitalism and economics have moved the world away from neorealist, Westphalian norms of military dominance and state-centrism. They write, “In Westphalian mode, international society has rested on reinforcing sovereign equality amongst states, excluding other units, and thus supporting a neorealist international system of like units” (Buzan et al., 1999 p. 100). This capitalist movement makes more space in the international world for non-state actors. Non-state actors can now be legally recognized in the international arena, with an ability to have international legal personality, rights, or duties under international law –one of the greatest challenges to state power (Engle, 2004; Buzan et al., 1999). With increased fortification of non-state actor power, states are fighting to maintain legitimacy with tactics such as increasing national pride. Brooks (2022) explains, “In country after country, highly nationalistic movements have arisen to insist on national sovereignty and to restore national pride: Modi in India, Recep Tayyip Erdogan in Turkey, Trump in the United States, Boris Johnson in Britain. To hell with cosmopolitanism and global convergence, they say. We’re going to make our own country great again in our own way” (p. 3).

Another challenge to state power is the de-politicization of the state in combination with the increase of global governance. Global governance, a neo-liberal concept, can be explained as “...governing, without sovereign authority, relationships that transcend national frontiers. Global governance is doing internationally what governments do at home. ... It emphasizes what is done rather than the constitutional basis for doing it” (Finkelstein, 1995 p. 369). Governance includes shared values as well as legal duties and can involve intergovernmental relations as well as non-state actors, institutions and the international market (Pureza 2002; Buzan et al., 1999). Global governance gives much more power to non-state actors in the form of legitimacy and autonomy. We see this power for non-state actors cropping up where institutions or regimes are providing governance in certain policy areas, such as the World Trade Organization, or the nuclear non-proliferation regime. Multinational corporations, banks and more can operate rather freely because of the space generated by more open borders, multiple layers of governance and democracy. The distinction between domestic and international political realms is blurring, and Buzan et al. (1999) warn that, “If this development continues, it points towards an international system that has no single, clearly dominant, multipurpose, multi-sectoral type of unit, but instead has a variety of more sector-specialised units.” (p. 94).

This disaggregation of power away from state governments can be seen as anarchic, uncontrolled hegemony, as well as a change in reference and scale of hegemony (Pureza, 2002). These changes leave room for non-state actors to begin wielding power in unprecedented ways.

Non-State Actor Power

Non-state actors have been gaining powers traditionally found under the nation-state, as well as filling in gaps of powers unassigned to or out of the nation-state’s scope. Non-state actor power can take many forms. Non-state actors can include regional blocs, supra-regional areas,

non-governmental organizations (NGOs), private military organizations, multinational corporations, national corporations, religious or ethnic groups, elite individuals, communities, media outlets, academic institutions, lobby groups, social movements, and more (Wijninga et al., 2014). As Wijninga et al. (2014) mention, these different non-state actors can wield power in different ways, as they vary so widely in size, characteristics, and structure. Some classify this movement of power as a transition to a new era in international relations “The transfer of state functions to regional and international organizations is seen as a manifestation of the general crisis of the Westphalian system of nation-states” (Laine, 2015). In fact, Engle (2004) notes how non-state actors can have rights (human rights) and duties under both national and international law. It is important to note that with the variety of non-state actors that exist, there is also a variety of difference in power, where not all non-state actors wield robust power (i.e. NGOs), and even fewer wield power that to compete with nation-states (i.e. regional blocs, some MNCs).

Non-state actors are taking power away from the nation-state in many ways. The European Union (EU) is the most prominent example of a regional institution that has moved power from the state to a supranational format. The EU’s distinction from other regional institutions in the world, based on political integration, incorporates issues such as health, environment, safety, and other market-correcting strategies. Areas of policy that were typically found under national control were transferred to European control. Examples of such policies are environmental protection, updated transport systems, and regulation of telecommunication. The EU also differs from other regional organizations in that it has an institutional structure that is separate from the participating nation-states, including an elected parliament and judicial body. The separation of powers as well as the horizontal governance structure are said to contribute to the EU’s overall success (Fabbrini, 2009). This does not necessarily mean that the EU member

states are equal in power, as Germany and France often dominate and influence smaller member states for their own needs. These smaller states (such as Britain) often align themselves with the United States as a way of reducing the political influence of France and Germany on the union. This tactic gives smaller member states more leverage (Mukhametdinov, 2007). The EU holds other unique features that make it stand out from other regional institutions, namely that its legislation supersedes laws of its member states. This means European citizens are bound to EU laws directly, without the intervention of their national governments. This is a prime example of deterioration of national sovereignty in Europe (Fabbrini, 2009). Fabbrini (2009) argues that the EU is indeed a post-Westphalian example,

"In sum, the EU has become a case of a regional organization with political features, a supranational polity functioning according to the logic of a compound democracy. Europe has gone beyond Westphalia, transforming the international relation of its nation states in the domestic basis of the supranational EU. No other existing regional organization has gone so far in overcoming the Westphalian principle of sovereignty. This is why the EU might be conceptualized as a post- Westphalian polity (Cooper 2003)." (Fabbrini, 2009, p. 12).

Falk (2002) notes that state power is still essential, but that this transfer of power must be acknowledged, explaining that the transfer of power to non-state actors "...does not imply "the end of the state," although it does mean that world order can no longer be usefully depicted by an exclusive focus on the role and inter actions of states. At the same time, the state and statecraft are sufficiently robust and resilient to remain essential features of any non-utopian form of post-Westphalian world order that can be set forth" (p. 328).

NGOs have become important non-state actors on the international stage, having increased over 7,600 percent from 1994 to 2009, with over 50,000 NGOs active internationally today. Wijninga et al. (2014) explain how NGOs form the "backbone of civil society", providing enormous contributions to employment, human rights, development, and humanitarian causes.

For example, in Sub-Saharan Africa, faith-based NGOs provide nearly 50 percent of educational and health services (Wijninga et al., 2014; James, 2011). Cumulatively, it was found that NGOs provided more aid than the United Nations worldwide. NGOs have distinct advantages over nation-states in terms of gaining and exercising power, including their lack of complicated bureaucracy, their ability for higher risk-taking, their cost-effectiveness, and their ability to take on issues that are outside of a nation-state's purview (Wijninga et al., 2014). However, although NGOs are gaining power and can have some advantages over nation-states, their power is still not comparable to nation-state power.

It is important to note that non-state actors are not always acting separately from the nation-state, as they may represent themselves under a certain nation-state, rely on nation-state military or transport, or find themselves in tit-for-tat reciprocal relationships with nation-states (Wijninga et al., 2014). NGOs can find much stronger power when they connect themselves to a nation-state. Wijninga et al. (2014) provide an example of how faith-based NGOs can enhance their power by connecting to a nation-state,

“...faith-based NGOs –which often operate at the grassroots level – are usually seen as more representative, legitimate, and more in tune with and understanding of people's beliefs. In that sense, their engagement helps to create and sustain social capital as the glue that holds communities together. Governments have picked up on this quality of FBOs, and are now “extending new forms of participatory governance to include faith communities, engaging them strategically in the development of more legitimate and effective decision- and policy-making” (p. 156).

Here we can see how faith-based NGOs can co-opt or be co-opted by nations. As mentioned, this can augment nation-state power, so it is important to recognize that not all increases of non-state power decrease or compete with nation-state power. For the purposes of this study, the focus is on non-state power that is generally separate from and in competition with nation-state power.

There are plenty of other examples of non-state actors and their influence on international world power, which is beyond the scope of this study. This dissertation focuses on the power of non-state actors in the category of MNCs, specifically large technological conglomerates. Meta Platforms (formerly known as Facebook) will be used as a case study.

The Power of Multinational Corporations

Multinational Power

Multinational corporations (MNCs), or transnational corporations, are a growing group of international actors who have enormous international influence (Popp, 2021). There has been an unparalleled increase of MNCs over the last 30 years, which Yeganeh (2020) explains has been “...fueled by globalization and the associated events including the collapse of the Soviet Union, advances in information technology, deregulation and market liberalization” (Yeganeh, 2020 p. 193). Multinational corporations function in multiple countries, but as Berezko (2022) notes, while they may operate in multiple nation-states, they are often controlled by centers of corporate power within only one nation-state, mainly countries in the Global North (Popp, 2021; Berezko, 2022).

MNC power is changing the international system. The significant growth of MNCs has created global socio-economic changes from production and consumption to employment, communication, and even education. The largest MNCs can drive prosperity, generate new social values, and spread new technology (Yeganeh, 2020). These are changes that used to be driven by only the strongest nations in the world—now they are being driven by something as minute as a corporate leader.

After the Cold War, multinational corporations moved into the realm of accumulating other corporations, forming massive multinational conglomerates (Popp, 2021). Conglomerates took

on the role of either squashing out competition, or acquiring their competition in order to monopolize their field in unprecedented ways. Today, these multinational conglomerates' practices of destroying their competition has decreased the average lifespan of a company, where it was 61 years in 1958, a company's average lifespan in 2011 was only 18 years. Not only are companies dying at higher rates, but there is also a decrease in new businesses in the United States (Yeganeh, 2020).

Neoliberal economics in the 1970s and 1980s created a trend to hamper regulations or government interferences concerning powerful companies. One example is the Chicago School, a legal theoretical approach concerning antitrust law, which framed monopolies as beneficial to consumers (Maggor, 2021). The market was to be left free as long as consumer prices were low (D'Cunha 2021). This idea was starkly contrasted to centuries-long doctrine that suggested large powers should be regulated or monitored in some way (D'Cunha 2021). Another example is in China, where there was "...a long period of relatively lax regulatory oversight and control over internet and technology companies that tended to favor innovation and growth over regulation" (Ng, 2021, p.2). This trend was a large factor in the growth of these large MNCs and the decrease in the number of businesses overall (Yeganeh, 2020; D'Cunha, 2021).

Today, we see these MNCs amassing unprecedented wealth, where in 2015, the ten largest MNCs combined revenue was larger than 180 countries' combined revenues (Yeganeh, 2020). For example, Yeganeh (2020) notes that Walmart's wealth is estimated to be larger than the economies of Australia, South Korea, and India. Likewise, Apple's wealth is greater than two-thirds of the world's countries (Yeganeh, 2020; Khanna and Francis, 2016). In America, five banks control 45 percent of the country's banking assets. This aggregation includes all United States industries, and the consolidation is taking place in Europe and Asia nearly as quickly

(Yeganeh, 2020). For example, Alibaba, China's largest digital platform conglomerate is the fastest growing e-commerce market in the world. It is important to note that Alibaba has recently been scrutinized by the Chinese government for its monopolistic expansion and abuse of market dominance, thus reducing its potential for dominance in recent years (Ng, 2022).

Big Tech MNCs

Some of the MNCs gaining the most power in terms of gains in market dominance feature the technology giants, where Yeganeh (2020) notes that “A few companies, six or nine, manage the organization of the information economy from internet search, advertising and electronic retailing to clouding and social media” (p. 195). Technology “tech” giants such as Google, Facebook, and Amazon each took just over a decade to grow into corporations that dominated the tech market. Big tech MNCs have the advantage of using their digital services to function with less physical assets and employees while still obtaining huge revenues (Yeganeh 2020). These MNCs have the monetary advantage of being able to buy out their competition rather than outperforming them, effectively monopolizing their sector (Maggor, 2021).

The power of some big technology MNCs is compounded by the fact that they can be considered digital online platform firms, and these platforms have added advantages to monopolization—there is an ecosystem of firms as well as billions of users who are dependent on these platforms. This concept is termed ‘platform economy’ (Kenney and Zysman, 2016) or ‘platform capitalism’ (Srnicsek, 2017). The power that these platforms hold has a lot to do with the fact that they lead in artificial intelligence (AI) technology and use their vast amounts of data to create powerful algorithmic business models (Kenney and Zysman, 2020). Working as intermediaries, these platforms are rerouting economic, political, and social activity to a digital modality that they control. The platforms charge firms and consumers for advertisement and tax

transactions through the platforms. This rerouting of the economy through these platforms means that platforms are able to amass even more data—where big data is precisely what renders AI stronger. Large data sets create higher efficiency in machine learning, meaning that as these platforms gain more data, their AI becomes more powerful resulting in even higher platform growth and dominance. Kenney and Zysman (2020) explain the importance of these platforms’ power is, “...perhaps rivalled only by the giant petroleum firms, such as Standard Oil, Royal Dutch Shell and British Petroleum, at the peak of their power. However, in contrast to the oil industry giants, these platforms have a virtual presence and can integrate into their business logic anyone with a computational device and tele- communications access” (p. 58). Although these MNCs are “multinational”, this rerouting of global wealth is directed mainly to the Global North, namely the West Coast (Kenney and Zysman, 2020; Berezko, 2022).

Facebook, considered one of the largest tech MNCs, dominates the social communications market. This study uses Facebook (now known as Meta Platforms), due to its multifaceted and prolific power worldwide, as a case study to examine the power of a non-state actor.

Meta Platforms as a Case Study

Meta Platforms description

“In a lot of ways Facebook is more like a government than a traditional company. We have this large community of people, and more than other technology companies we’re really setting policies” Mark Zuckerberg (Foer, 2017, p1.).

Meta Platforms, (formerly known as Facebook) is one of the world’s “Big Five”, one of the five most powerful technology companies in the United States. Founded in 2004 by 19-year-old Harvard University dropout Mark Zuckerberg, Meta Platforms began as a social networking website known as Facebook (Carlson, 2010; Facebook, 2018). Facebook’s popularity skyrocketed by 2012 and Facebook became a public company with one of the largest initial

public offerings of \$104 billion. Facebook is now the largest social media platform globally, with 2.45 billion Facebook users and offered in over 60 languages in almost all countries of the world (Facebook, 2018; Taylor, 2020). Over the years, Facebook has become known not just as a social media company, but as a multinational technology conglomerate, having acquired a plethora of other companies in multiple technological realms (social media, virtual reality, instant messaging, and more), the largest being Instagram, (Facebook, 2018) WhatsApp, and Oculus VR (Andrews, 2019). Facebook, the social media component of Meta Platforms, remains Meta Platforms' powerhouse for revenue, number of users and more.

Facebook, the company, renamed itself Meta Platforms in 2021 (Isaac, 2021; Meta Platforms, 2022a), a nod to the Metaverse, a new online and virtual universe, and perhaps an effort to disassociate the company with the misinformation and hate speech controversies of Facebook (Isaac, 2021). Meta's 2021 revenue was \$117,929 million (Meta Platforms, 2022a), with the majority of their revenue coming from advertising (Meta, Platforms, 2022a). Meta Platforms' headquarters is in California, with offices in over 80 cities worldwide (Meta, Platforms, 2022a).

Meta Platforms' Power

To say that Meta Platforms' power is vast is an understatement. Its number of users surpass the population of the world's two largest countries combined (China and India). Meta Platforms' revenue surpasses the GDP of many of the world's countries, ranking 61st if compared to countries' GDP (The World Bank, 2023). Meta Platforms and its companies make rules, disseminate news, control internet traffic, and mediate a bulk of society's everyday interactions.

Meta Platforms, along with Google, control a large majority of internet movement where, “...over 70% of all internet traffic goes through websites owned by these two companies alone” (Simons and Ghosh, 2020, p. 3). This gives these companies enormous power as they have control over the flow of information worldwide—they can decide which information is promoted and which information is left out on a global scale. Furthermore, half of the United States population obtain their news from Facebook (Simons and Ghosh, 2020), meaning that Meta Platforms is used as a trusted source of facts for one of the world’s most influential nations. Additionally, Meta Platforms and its platforms create and enforce rules (aka policy) for its two billion plus users across the world, meaning that this one entity creates policies (without true national oversight) for 25percent of the world population, a feat that no nation-state can accomplish, as no nation has 2 billion inhabitants.

Through algorithms on social media such as Facebook and Instagram, (algorithms arguably being Meta Platforms’ greatest power (Foer, 2017)), Meta Platforms uses machine learning to sort content and advertisements and provide results that are most relevant to the search query. Different users will receive different results based on predictions about the content they are most likely to be interested in. These algorithms are a kind of gatekeeper, shaping public opinion, controlling access to news, knowledge, information, and even misinformation. Simons and Ghosh (2020) explain that “The design of algorithms in internet platforms has become a kind of public policymaking. The goals and values built into the design of these algorithms, and the interests they favor, affect our society, economy, and democracy” (Simons and Ghosh, 2020, p. 3). Prioritizing interests, deciding what to filter, how to rank, and rules about detecting misinformation or even attempts of terrorism are all up to the algorithm. According to Farrell et al. (2018),

“This means that Facebook is a powerful sovereign and Mark Zuckerberg is the key lawgiver. In some ways, of course, the comparison is inexact. Facebook doesn’t have the power to tax, and it certainly doesn’t have what Louis XIV called “the final argument of kings” — the ability to use physical violence to force people to comply with its demands. And Facebook must answer to the regulators of other powerful sovereign governments, that of the United States and others around the world. But this is less of a check on power than it first appears because the impact of social media on society and the economy is still poorly understood, and regulation takes time to catch up.” (Farrell et al., 2018, p. 1)

Farrell et al. (2018) see Facebook as an autocratic regime with Mark Zuckerberg at the helm. Simons and Ghosh (2020) also take issue with the control Meta Platforms holds, claiming the unilateral control over their algorithms threaten democracy by structuring and shaping public debate, controlling our access to news, and our communication and debate with one another. The rapid pace at which Meta Platforms’ technology is advancing also produces problems in terms of regulation—even Meta Platforms mentions the various ways in which regulations (nationally and internationally) are continually evolving and being tested in courts. Meta Platforms states that,

“These laws and regulations involve matters including privacy, data use, data protection and personal information, biometrics, encryption, rights of publicity, content, intellectual property, advertising, marketing, distribution, data security, data retention and deletion, data localization and storage, data disclosure, artificial intelligence, electronic contracts and other communications, competition, protection of minors, consumer protection, civil rights, telecommunications, product liability, e-commerce, taxation, economic or other trade controls including sanctions, anti-corruption and political law compliance, securities law compliance, and online payment services” (Meta Platforms, 2022a, p. 8)

Meta Platforms acknowledges that due to the rapid advancement of the technology industry, “laws and regulations are uncertain” and are applied unevenly or inconsistently based on which nation-state decides to apply them (Meta Platforms, 2022a). The technology industry also creates discrepancies for Meta Platforms in terms of policies and guidelines, where, according to Taylor (2020), “Because it is a social media platform, Facebook does not have any obligation to meet standards of political fairness and accuracy. And being solely self-regulated,

Facebook reports to no higher authority. There is no commission or agency capable of regulating the range of *sic* raised about Facebook” (p. 6).

Although Meta Platforms might not be fully under one government’s purview, restrictions on the use of Meta Platforms can still be applied by countries. Countries can try to regulate Meta Platforms by passing laws or regulations that impact Meta Platforms’ operations within their jurisdiction. For example, the United States can regulate and enforce laws concerning data privacy, consumer protections, or free speech. However, the execution of regulation, rather than regulation itself, is what will determine Meta Platforms’ exercise of sovereignty. Enforcing regulations can be costly, time-consuming, and inefficient, leaving Meta Platforms with a power that is potentially above a nation-state’s regulations. Not only does Meta Platforms get to make and follow its own rules, but it is also expected to provide services and security—some things that the world used to expect only governments to do. The expectations of Meta Platforms to perform nation-state-like functions only adds to Meta Platforms’ power through legitimacy and delegation of power from nation-states.

While this chapter has shown the immense power that non-state actors (especially MNCs) can hold, the important point is that this non-state actor power is not currently being measured in systematic, widespread ways. Worldwide, and even to a layperson, the world’s greatest national powers are well known—the US, China, Russia. Nation-states’ powers are constantly being measured against one another, especially through measurement indexes, which add together multiple strengths of countries and compare them to one another. Startlingly, this is not being done with non-state actors, although their power is vast. This does not just mean that non-state actors’ powers are not being measured systematically, but they are also not being measured

against nation-state power. It is one thing to know what the most powerful non-state actor is, but it is another to understand how that power sizes up to nation-states.

CHAPTER 4 Measuring World Power

Introduction

As change in world power is constant, it is important to be able to assess what that change in power is, and where the power is held. Measuring world power is fundamental in understanding the international system, predicting behaviors, helping inform decisions, and facilitating foreign policy. This section examines common ways that world power is measured currently. These measurements, often in the form of power formulas and power indexes, are overwhelmingly nation-state-centric. This section details the lack of power measurements for non-state actors and identifies a potentially suitable nation-state-centric power index to be applied to a non-state actor.

Power Formulas and Power Indexes

Current efforts at measuring world power are often carried out by comparing nation-state power by using tools called power formulas, or national power indexes (which use power formulas to rank nation-states by power). Power formulas calculate nation-state power based on indicators such as GDP, military strength, population size, and territory size. Defining power is a subjective and wide-ranging—measuring such diverse attributes from military power to cultural influence. Höhn (2011), a scholar who compared power formulas which calculate nation-state power, noted that power formulas have been found to have as little as two indicators, up to as many as 236 creating a wide-ranging difference in how nation-state power is measured. Examining models from as early as 1741 to more contemporary models as late as 2011, Höhn found that pre-internet models typically had an average of 13 variables, where post-internet models now have an average of 28 variables (Höhn, 2011).

In Höhn's comprehensive comparison of 69 worldwide power formulas for nation-states, the most common indicators measured were territory size, population size, military strength, military expenditures, and national income/GNP/GDP (Höhn, 2011). Other common indicators include energy/electricity, and iron/steel production, but more recent formulas have begun to incorporate a wider variety of indicators to encompass a more comprehensive picture of national power. According to Höhn (2011), "Ideally all power formulas should have one military and one economic variable to indicate that they are power formulas in the broader sense of international relations", although he notes that there are power formulas that do not include either or both of these indicators.

Indicators included in power formulas include both "hard" and "soft" powers, although many formulas focus more on hard powers, such as war, threats, and embargoes, showing a nation-state's ability to demonstrate influence and strength over other countries (Höhn, 2011; Beckley, 2018). Ray Cline, a United States Central Intelligence Agency analyst, created what is perhaps the best-known power formula in 1975, which measures critical mass, population, territory, economic capability, military capability, strategic purpose, and national will, including both hard and soft powers (Höhn, 2011; Beckley, 2018). The Chinese, who have a long history as a major global power, are particularly interested in measuring national power in order to ensure that their influence and interests continue to lead in the international system. They have developed a Comprehensive National Power (CNP), inspired by Ray Cline's formula because it factors in soft powers more than traditional formulas. As explained by Höhn (2011), "What Chinese researchers most appreciate is that 'national power is a product rather than a sum of 'soft' and 'hard' powers [and] that 'soft' power is as equally important as 'hard' power in political reality" (XUETONG: 2006: 16)" (p 117). The CNP is known for bringing in a more radical

weight for soft powers, where scoring a zero for soft powers would result in an overall score of zero (Höhn, 2011).

Another highly popular power formula is the Composite Indicator of National Capability (CINC). The CINC, applied in over 1,000 studies, uses, "...military spending, troops, population, urban population, iron and steel production, and energy consumption" (Beckley, 2018 p. 9). Throughout the years, the value of the CINC has been demonstrated through the many adaptations of the formula, showing its adaptability and applicability. For example, iterations of the CINC are Charles Doran and Wes Parson's (1980) use of the CINC formula minus military expenditures, or Bruce Bueno de Mesquita's (1981) adjustment on distance in order to take location into account (Höhn, 2011).

The Lowy Institute's Asia Power Index (Lowy Institute, 2022a; Lemahieu and Leng, 2021) is an example of an index using a complicated power formula with various indicators, sub indicators, weights, including hard and soft powers, and a ranking of nations based on those results. This index will be revisited in more detail in the next chapter as the Asia Power Index is applied to specific research questions in this dissertation.

Power formulas and indexes are created and used by many countries in order to compare and measure their strengths relative to one another. These measurements assist countries in evaluating their status in the international arena, which allow countries to make informed foreign policy decisions. The United States and China created (and shared publicly) the largest share of available formulas, although other countries, such as Germany, Japan, Brazil, Poland, and Russia, have also created a smaller, but still important share of power formulas (Höhn, 2011).

A Lack of Measurement for Non-State Actors

Power formulas and indexes are used widely by those measuring world power, but these formulas and indexes are overwhelmingly focused on the power of nation-states. However, nation-states do not exist in isolation in the international arena, and in order to have an accurate understanding of world power, power formulas should be applicable to non-state actors as well.

Power indexes intended for the measurement of nation-state power are not appropriate to apply to non-state actors, as their nation-state-centric indicators (i.e. military capabilities, economic size, diplomatic influence) measure for powers most non-state actors do not have. More importantly, these nation-state-centric power indexes do not include indicators which would more accurately capture the power that is unique to non-state actors (i.e. technological power, monopolistic power). As Mishali-Ram (2009) explains,

“...scholars have examined the role of nonstate actors in world politics, but have not classified the power resources held by these actors in a way that they may be compared with measures of state power. Such measures should consider the unique characteristics of nonstate political actors, such as the absence of sovereignty, territory and major military force...” (p. 58).

Although there are no widely used power indexes or formulas for non-state actors, non-state actors are measured (and thus data can be found) in less-comprehensive ways, such as the top 10 largest international companies or the strongest terrorist group or the largest NGO. An example of this is the well-known and internationally comprehensive Forbes Global 2000, which, “...ranks the largest companies in the world using four metrics: sales, profits, assets, and market value” (Murphy and Contreras, 2022, p. 1). Although it uses four metrics, these metrics all focus on one concept: economics. This makes sense for Forbes, but reveals the limitations encountered by scholars attempting to examine a comprehensive picture of non-state actor power and world power, which would include many other factors than simply economics. Forbes notes

that data used for their rankings comes mostly from databases and the financial period used depends on “...the timeliness of our data collection/screening and company reporting policies, country-specific reporting policies and the lag time between when a company releases its financial data and when the databases capture it for screening/ranking” (Murphy and Contreras, 2022, p. 1). They note that these data are checked against other data sources, as well as financial statements from the companies. While this effort examines companies internationally, it still measures only one component—economics.

Another example of a measurement of non-state actors looks at the impact of terrorist groups. The Institute for Economics & Peace creates an annual Global Terrorism Index, which names the four deadliest terrorist groups in the world, based on deaths from terrorism as their variable (Institute for Economics & Peace, 2022). This can underestimate the true power of this group of non-state actors, as it ignores size of military, technology, cultural influence, and many other factors that could attribute to their world power. Although the Global Terrorism report mentions some of these factors, such as technology and military, they do not factor this into their actual index for power.

By focusing only on economics or terrorism, non-state actors’ power from variables such as technology, data, future capability, or social and cultural influence, are not identified. Not measuring these additional variables creates a severe underestimation of power of non-state actors. Likewise, not having a consistent way to measure non-state actors, such as through an index or formula, means that examining the power of non-state actors is difficult. The result of this is the lack of much research on the comparative power of non-state actors (in particular addressing their growing power via comparison to nation-states). Additionally, more

comprehensive measures of non-state actors would also allow for greater comparison with power of nation-states.

One power index which actually does focus on non-state actor power is a theoretical power index created by Meirav Mishali-Ram (2009). This index examines ‘ethnic non-state actors’ using four categories to measure power: power type (political and military power), power resources (manpower and weaponry), diplomatic power (recognition by global superpowers), and institutional power (institutionalization). While this index contains variables more targeted toward non-state actors’ power, it is narrow in scope, focusing only on ethnic non-state actors, which is only a portion of the types of non-state actors that exist. Additionally, this index’s categories are insufficient in terms of capturing the true power of these ethnic non-state actors. For example, the four categories to measure power do not include potentially crucial indicators for non-state actors, such as technology or economics.

Compared to the multitude of nation-state power indexes and formulas, and the multitudes of variables within these calculations, efforts at measuring non-state actors’ powers are minimal. While it may not be possible to measure all types of power in a single index, and where some types of power are difficult to quantify, measuring a much more comprehensive variety of variables for non-state actors would provide a more complete framework for understanding world power. Non-state actors play a significant role in the international arena and failing to measure their power results in an incomplete picture of the distribution of world power. Given the growing power of non-state actors, having a power index for multiple kinds of non-state actors that can also be applied to nation-states allows for a stronger understanding of power in the international system.

Non-state actors have greater access to technology compared to nation-states, which can lead to significant power for non-state actors. Technology can give non-state actors new capabilities that challenge the power of non-state actors. A technopolitical lens can enhance this topic by providing insight into today's world power, including what an index might contain in order to capture contemporary technological powers of non-state actors. Topics such as data, technology, AI, and viral propensity could all be factored into a power index to provide a more accurate idea of non-state actor power. Considering world power with a technopolitical lens, we can see that world power is being reconfigured through technology. An example of this reconfiguration can be applied to the topic of surveillance, where technology "...has elaborated new forms of power and control – regarding, for example, self-imposed censorship, governmental and commercial utilization of Internet search histories, and how online algorithms shape and adapt to people's interests and communities (Bauman et al., 2014; Lyon, 2007)" (Eriksson and Newlove-Eriksson, 2021, p. 14). Technology reorganizes how the world shops, gets information, connects to one another, and more. Power is being reconstituted from resources such as knowledge and information, resources that are increasingly owned by non-state actors rather than nation-states (Stepien, 2016). Stepien (2016) explains how technology can create its own power and reconfigure current power,

"Technological power, based on the capacity to generate progress, and on application, transfer and the control of technology, is a specific type of power in the international environment. It is not only an independent vehicle of potential, but at the same time a catalyst for building other spheres of power, including its economic, political, ideological, cultural and social dimensions" (Stepien, 2016, p xii).

Examining how technology interplays with and creates new power in the international environment can elucidate how non-state actors, who maintain vast technological resources, are contributing to the disruption of nation-state power in the world today.

Summary

This chapter has examined common methods of measuring power, specifically nation-state power measurements, known as national power indexes, as well as elucidated the lack of measurement methods for non-state actor power. This chapter also highlights the importance of applying a technopolitical lens to the concept of non-state actor power.

The next chapter on methodology includes the application of the Asia Power Index to a non-state actor (Meta Platforms), as well as provides methodology for each research question presented in Chapter 1.

CHAPTER 5 Methodology

Introduction

This section details the methods used to answer the four research questions of this dissertation. This includes describing the power measurement tool used to answer specific research questions, rationalization for its use, details on data collection, and methods for scoring in the application of the Asia Power Index to Meta Platforms.

Methodology

In today's world, it is important to ask how non-state actors rate, when compared with nation-states, in calculations of national world power, especially considering changing sources of power enabled by technology. To examine this question, Meta Platforms is used as a case study, enhanced by the theoretical lens of technopolitics. The Lowy Institute Asia Power Index (described in the next section) is applied to Meta Platforms to obtain a power score to compare against nation-states.

Lowy Institute Asia Power Index Description

In order to answer the research questions below, it was necessary to choose a Power Index for which to compare Meta Platforms against nation-states. The index chosen was the Lowy Institute Asia Power Index. The Lowy Institute's Asia Power Index (Lowy Institute, 2022a; Lemahieu and Leng, 2021) is composed of various indicators, sub indicators, weights, and ranking of nations based on those results. The Lowy Institute's Asia Power Index for 2021 ranks 26 countries in terms of comprehensive power in Asia (although the index also includes the United States as one of its index countries). The index aims to measure power in terms of nation-states' ability to "shape and respond to their external environment" (p. 4), and "Power is

defined by the Index as the capacity of a state to direct or influence the behaviour of other states, non-state actors, and the course of international events” (Lemahieu and Leng, 2021, p. 4).

The index includes 8 thematic power measures, 30 sub-measures, and 131 overall indicators (see Appendix, Table A.4 for measure, sub-measure and indicator definitions). Sub-measures and indicators are adjusted slightly through the years in order to adjust with new world circumstances. For example, in 2021, there was an addition of some indicators concerning Covid-19. In the Lowy Institute Asia Power Index 2021 Key Findings (Lemahieu and Leng, 2021), it was explained that indicators were selected based on extensive review of the literature as well as expert consultations. Additionally,

“The methodological framework of the Index is informed by the OECD Handbook on Constructing Composite Indicators. A distance-to-frontier approach is used to compare a country’s results with the best performing and worst performing countries in each dataset. The distance-to-frontier method allows for different indicators to be made comparable across a diverse set of metrics, while preserving the relative distance among the original data values. The method also reflects the notion that power in international relations is relative, measured as a comparative advantage in a given frame of reference” (Lemahieu and Leng, 2021, p. 26).

The eight power measures are divided into Resource Measures and Influence Measures, where Resource Measures are aimed to measure what countries have, and Influence Measures aim to examine what countries do with the resources that they have. These two categories consist of the following eight measures:

Resource Measures: Economic Capability, Military Capability, Resilience, and Future Resources

Influence Measures: Economic Relationships, Defense Networks, Diplomatic Influence, and Cultural Influence

The sub-measures include the following:

- **Economic Capability:** Size, International Leverage, Technology, and Communication
- **Military Capability:** Defence Spending, Armed Forces, Weapons And Platforms, Signature Capabilities, Asian Military Posture.
- **Resilience:** Internal Stability, Resource Security, Geoeconomic Security, Geopolitical Security, And Nuclear Deterrence
- **Future Resources:** Economic Resources 2030, Defence Resources 2030, Broad Resources 2030, Demographic Resources 2050.
- **Economic Relationships:** Regional Trade Relations, Regional Investment Ties, and Economic Diplomacy.
- **Defence Networks:** Regional Alliance Network, Regional Defence Diplomacy, and Global Defence Partnerships.
- **Diplomatic Influence:** Diplomatic Network, Multilateral Power, and Foreign Policy.
- **Cultural Influence:** Cultural Projection, Information Flows, and People Exchanges.

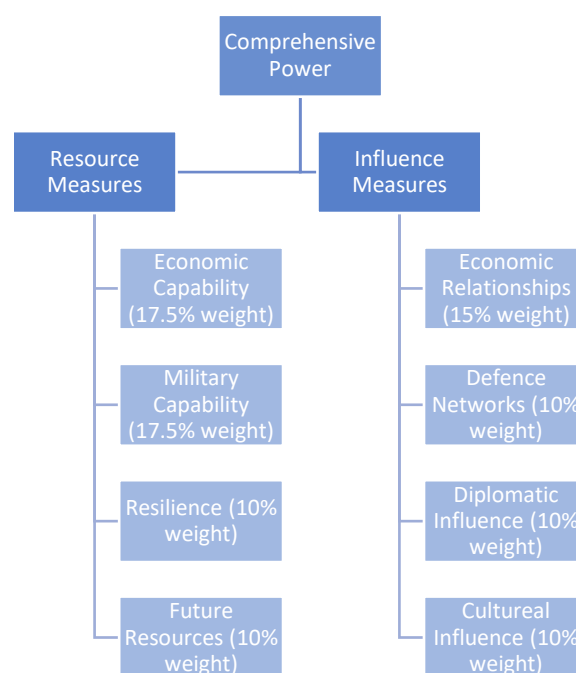


Figure 5.1 Lowy Institute Asia Power Index Structure

Each measure, sub-measure, and indicator is assigned a weight (see figure 5.1) based on the Lowy Institute experts' judgement of relative importance for exercising nation-state power. The Institute referred to academic literature as well as consultations with policymakers from the region. As this power index is focused on Asia, there was a focus on geopolitical power

advantageous to Asian countries, but also power indicators that are broadly accepted in scholarly communities. The Lowy Institute acknowledges that these decisions are value judgements, where other experts may justify alternative values and assumptions. Accommodatingly, the Asia Power Index's digital platform provides the option to adjust weightings based on their own preferences, reordering the rankings of each nation-state based on the new adjustments. All 131 indicators and their weights can be found in Asia Power Index Key Findings Report (Lemahieu and Leng, 2021; Lowy Institute, 2022b).

The Lowy Institute's Asia Power Index was chosen to answer RQ 1 for multiple reasons. As mentioned in Chapter 4, Measuring World Power, there are various other power indexes and formulas to measure nation-state power. However, most of these indexes are heavily nation-state-centric and military-focused that their variables do not make sense for non-state actors, who often do not have a military and do not participate in military activities. Take for example, one of the most popular power indexes, the CINC. The CINC focuses on military spending, troops, population, iron and steel production, and energy consumption. If we applied those categories to Meta Platforms, out of the five categories, we could probably only measure population and potentially energy consumption—but these two variables would not be indicative of the power Meta Platforms holds internationally. It was important to find a power index which measured soft and hard powers as well as contemporary and traditional powers. Likewise, many of the indexes did not provide details on how they measured the variables they examined—for example, they might have stated they were measuring military power, but did not state what they calculated to score military power (i.e. Troops, alliances, equipment, technology, cyber technology, etc.). A lack of details regarding the method of measuring variables would hinder replicating measurements, resulting comparisons of measurements that were less precise or even

incorrect altogether. For these reasons, indexes lacking details on their measurements were less than ideal choices for this study.

In contrast to the other, the Lowy Institute's Asia Power Index met the needs of transparency, replicability, variety and weight of indicators, reputation, and applicability to non-state actors. For the purposes of RQ1 and this study, this made the Asia Power Index the most suitable of the indexes examined.

Transparency

The Lowy Institute's Asia Power Index provided transparency of data and data sources. For example, on their online platform a source is provided for each of the 131 variables measured. While some of those sources are the Lowy institute's internal research, a good portion of the sources are publicly accessible data Lowy Institute, (2022b).

Replicability

The formulas and weights used in the Asia Power Index were presented clearly in multiple formats. The online platform provides counts, totals, scores, ranks, and weights for the power formula used in the Asia Power Index. This facilitates ease of replicability and application of this index for other uses, such as application to non-state actors. The Asia Power Index website includes a page on methodology (Lowy Institute, 2022b) which includes materials used to score each index item. Lastly, the accessibility of the Lowy team is helpful for replicability, as their contact information is publicly available and their team responded to an inquiry (for the purposes of this dissertation) about the details of their formula in a timely and efficient manner.

Variety and Weight of Indexes

Relative to other indexes and formulas, the Asia Power Index included a healthy balance of strong and soft powers as well as contemporary and traditional powers. For example, while they measure economic and military capabilities, they also look at resilience, future resources, diplomatic influence, and cultural influence. Within each of these measures were sub-measures including contemporary facets of power such as covid-19 vaccinations, number of supercomputers, number of satellites, and more. Still, this index's weighting of economics and military was heavier than the other categories, and there was an overall lack of focus on new technologies and non-state centric factors of power.

Reputation

The Lowy Institute describes itself as “an Australian think-tank with a global outlook” (Lowy Institute, 2023). According to a news report by The New Daily, the Asia Power Index “...was described by a senior CIA analyst as the “best, most comprehensive” assessment of power” (Barro, 2019). In the 2019 Global Go To Think Tank Index Report (McGann, 2020), out of over 8,000 think tanks examined, the Lowy institute was ranked highest out of 42 Australian think tanks. It also ranked fifth for Top Think Tanks in South and Southeast Asia and the Pacific, 24th in Think Tanks with Outstanding Policy-Oriented Research Programs, and ranked 64th in Top Think Tanks Worldwide.

While the Lowy Institute labels themselves non-partisan and independent, some have claimed that the Lowy Institute is center-right, pro-US, and pro-military (Rundle, 2018). Founded in 2003 by a generous gift from Frank Lowy, a shopping-center entrepreneur, the Lowy Institute is now a model think tank, publishing and presenting research that is freely available and widely used worldwide. Think tanks can often be accused of running like lobby groups due

to their potentially non-independent funding sources. The program is composed of a board including business professionals, political professionals, academics, retired military individuals, and Lowy family members (O'Malley, 2020). Although there may be slight biases, overall, the institute's reputation is satisfactory for the purpose of this study.

Applicability to Non-State Actors

One of the most important factors in choosing a power index for this study is applicability to non-state actors. It was necessary to find an index with factors that would encompass a good portion of the power that non-state actors hold. The Asia Power Index contained multiple factors that could capture the power of non-state actors, such as its focus on economics, technology (although this area could use a lot of adjustments and updating), resilience, diplomatic influence, and cultural influence. Other indexes' heavy focus on military and economics rendered them much less suitable for examining the power of non-state actors.

Weaknesses

Weaknesses of the Asia Power Index will be discussed more thoroughly in the discussion section after having applied the index to a non-state actor. However, one important weaknesses of the Asia Power Index is that it is focused on the Asia Pacific region, meaning it only examines 26 countries, primarily in Asia except for the US, which is included in the index. However, this does not affect the ability to apply this index to a non-state actor. As mentioned previously, this index, being nation-state-centric, also does not include multiple variables that could better capture the power of non-state actors. That issue, however, is a product of the fact that there is no index for non-state actors.

Data Collection

Data was collected about Meta Platforms (also known as Facebook) for each of the Lowy Institute Asia Power Index data points. The most recent version of Lowy Institute's Asia Power Index is using 2021 data, so data was sourced from 2021 where possible.

Data Sources and Substitutions

Data was first searched for from the sources that Lowy Institute provided on each indicator or sub-indicator. However, because corporate and non-state actor data is not always reported the same as nation-state data, it was often necessary to search for data in different locations or formats. For example, for Gross Domestic Product (GDP), the Lowy Institute's source was the International Monetary Fund. A quick Google search shows that the definition of "gross domestic product" is "the total value of goods produced and services provided in a country during one year". This means that GDP is not a measure that can be used for a non-state actor, and that Meta Platforms would not be listed on the IMF website. As such, Meta Platforms' yearly revenue was used (reported in their Form 10-K Financial Report for 2021 filed with the United States Securities And Exchange Commission) in place of GDP (Meta Platforms, 2021a). Another example of requiring a different data source is for total working-age population. The Lowy Institute obtained this information from the UN Population Division, which did not include data for non-countries, so this information was obtained from Meta Platforms' website concerning total employees instead. Further explanation is required for this particular data point. Because Meta Platforms is a virtual, non-state actor, rather than a physical nation-state with a physical territory and boundary, there is no technical "population" able to live within the physical boundaries of Meta Platforms. As such, population is considered to be the employees of Meta Platforms. Another potential substitution for population could have been "users" of Meta

Platforms, but challengingly, these individuals each live within the boundaries of an actual nation-state's territory, and with the 2,196 million monthly users, we would have been double-counting individuals from nearly all the countries in the world. It is more appropriate that employees of Meta Platforms be used for measures concerning population. Lastly, Lowy reports that over half of their data points were obtained through Lowy Institute research, rather than from international or national sources that are publicly available (Lemahieu and Leng, 2021). Resultantly, some Meta Platforms data could not come from the same source the Power Index (see Appendix Table A.2 for more details).

This study's intention is to be as accurate as possible, meaning calculations are as conservative as possible, so as not to overestimate the power of Meta Platforms (see appendix section labeled "Measures Meta Platforms Did Not Qualify for on the Asia Power Index" and Table A.2 for detailed discussion on non-applicable substitutions). This means that when there was a data point that was not applicable to Meta Platforms, Meta Platforms received a null zero for that measure. A good example for this is embassies. Meta Platforms is not a nation-state and therefore does not have embassies, so there would be a null zero score for this measure. Earned zeroes also were also assigned to Meta Platforms in some cases for receiving a low score on a particular indicator, not solely for non-comparable data. All null zeros throughout this dissertation will be termed "null zeros", and earned zeros will be termed "earned zeros" to distinguish the different types of zeros.

Data for the Eight Power Measures

Economic Capability

Within this power measure, the Asia Power Index examined size, international leverage, technology, and connectivity, with a total of 21 indicators to inform this measure. The indicator

for Size is intended to measure the economic weight of a nation-state, and a nation-state's gross domestic product, (GDP) was used for this indicator. Because Meta Platforms is not a nation-state, they do not have a GDP, so Meta Platforms' annual revenue was used (as reported in their annual report to the United States Securities and Exchange Commission). Under the measure for Technology, one of the indicators was Research and Development (R&D) spending as percent of GDP. In this case, Meta Platforms' 2021 report to the United States Securities and Exchange Commission contained information on R&D spending, so calculated this figure using their R&D spending as a percent of their annual revenue. Some areas under economic capability were not applicable to Meta Platforms as a non-nation-state, such as Global Reserve Currency (defined by the Asia Power Index as "Currency composition of official foreign exchange reserves"), or International Currency Share (defined by the Asia Power Index as "Share of international financial transactions undertaken in national currency"). Non-state actors generally do not have their own currency and are not allowed access to nation-state-specific privileges such as foreign exchange reserves. However, currency for non-nations is a possibility, and Meta Platforms did attempt (but failed) its own currency multiple times (Caplin, 2022). For detailed information on data collected and sources for each indicator, see the Appendix table A.1.

Military Capability

Within this power measure, the Asia Power Index examined defense spending, armed forces, weapons and platforms, signature capabilities, and Asian military posture, with a total of 22 indicators to inform this measure. As Meta Platforms does not have a traditional military, many of the indicators for this measure received a zero. For example, under Defense Spending, one indicator was military expenditure. Because Meta Platforms has no military, it also has no military expenditure, so an earned zero was given for this indicator. One indicator that was

applicable under this power measure was training, readiness and sustainment, defined by the index as “Training and preparedness for sustained operations in the event of interstate conflict, two-year rolling average, 0–100 (2020–21)...” (Lemahieu and Leng, 2021, p. 21). Although there is no military training for Meta Platforms because there is no military, there is ample evidence of preparedness for sustained operations for Meta Platforms in the event of interstate conflict. One example is that during the Covid-19 pandemic, 95 percent of Facebook employees were working remotely (Rodriguez, 2020). This means that if the United States (which houses Facebook’s headquarters and multiple satellite sites) were to face interstate conflict, the work for Meta Platforms could continue remotely, and not necessarily even in the United States. For these reasons, it is visible that Meta Platforms could survive without being dependent on a geographic location, and could sustain operations in the event of interstate conflict. Resultantly, Meta Platforms received a perfect score for this particular indicator.

Resilience

Within this power measure, the Asia Power Index examined internal stability, resource security, geoeconomic security, geopolitical security, and nuclear deterrence, with a total of 25 indicators to inform this measure. Under the sub-measure of Internal Stability, one indicator was high-intensity internal conflict years, defined as “Number of years since 1946 in which at least one internal armed conflict resulted in 1,000 or more battle-related deaths (1946–2019)” (Lemahieu and Leng, 2021, p. 28). As Meta Platforms has no territory and no citizens, and there has been no internal conflict resulting in deaths, Meta Platforms would receive a high score for this indicator. Likewise, another indicator for infant mortality would also provide Meta Platforms a high score because they have no citizens, thus no infant deaths to count. For an indicator such

as rare-earth metals supply, under the sub-measure of Resource Security, Meta Platforms would score an earned zero, as it does not mine rare-earth metals.

Meta Platforms may receive a zero in a category for multiple reasons: firstly, the number may not be countable because the indicator cannot apply to non-state actors. This would result in a null zero (see Appendix table A.3 as well as Chapter 6 for more details). Secondly, the number may be countable, but Meta Platforms does not possess any of the power for that category, such as the nuclear weapons indicator; we can count how many nuclear weapons Meta Platforms possesses, which is zero, so we can score them with an earned zero for this indicator. Lastly, Meta Platforms may hold power in a certain indicator, but their holdings could be so low that they fall too low in the chart to compare against countries. An example of this is Landmass deterrent, under the sub-measure of Geopolitical Security in the resilience measure. This indicator is defined as country landmass per square kilometers. Meta Platforms technically owns 1,400 acres of land (Yang, 2021) and when compared to other countries' landmasses, 1,400 acres is so miniscule that Meta Platforms falls off the scale at the low end. Tangentially, it is important to note that Meta Platforms, unlike a nation-state, which owns land, does not hold sovereignty over the land or have citizens living within that land. As such, this land is not considered Meta Platforms' 'territory'.

Future Resources

Within this power measure, the Asia Power Index examined economic resources 2030, defense resources 2030, broad resources 2030, and demographic resources 2050 with a total of ten indicators to inform this measure. Under the sub-measure of Economic Resources 2030 is the GDP forecast 2030. In this case, revenue was substituted for GDP to provide the projected revenue for Meta Platforms in 2030 (Stock Forecast, 2023), and a comparison of projections for

nation-states with similar GDPs to Meta Platforms (New Zealand and Nepal) were used to confirm accuracy. Under the sub-measure of Demographic Resources 2050, one indicator is working-age population (described as age 15-64). For this indicator, employees were substituted for population, and because all reported employees are legal working-age population.

Concerning population, in times when measuring the entire population, such as military deaths or infant deaths within the population, Meta Platforms is not considered to have ‘citizens’ because Meta Platforms has no individuals living within its circumscription because it has no sovereign territory. However, when discussing a population of workers, Meta Platforms does indeed have workers, so they are considered a population for this particular indicator. Another indicator which considers Meta Platforms’ employees as a population is total R&D researchers, under the sub-measure of Technology in the Economic Capability measure (see Appendix table A.1 for full details).

Economic Relationships

Within this power measure, the Asia Power Index examined regional trade relations, regional investment ties, and economic diplomacy with a total of 12 indicators to inform this measure. Under the Regional Trade Relationships sub-measure, for the indicator Trade with Region, defined as “Total value of trade with Index countries”, Meta Platforms’ score was obtained by comparing Meta Platforms’ trade with other countries’ trade in the Asia-Pacific region. For example, Meta Platforms’ trade measured at \$26.7 billion (Iqbal, 2023), which would place it next to other countries with similar trade amounts in the Asia-Pacific region, such as Cambodia, which had \$28.1 billion in trade. For the sub-measure of Economic Diplomacy, under the indicator Global FTAs, defined as “Bilateral and multilateral free trade agreements concluded by Index countries with other countries” (Lemahieu and Leng, 2021, p. 29), Meta Platforms would

be disqualified, as it is not a nation-state. Multiple indicators under this measure require an entity to be a nation-state to allow for measurement.

Defense Networks

Within this power measure, the Asia Power Index examined regional alliance network, regional defense diplomacy, and global defense partnerships with a total of 14 indicators to inform this measure. The measure is defined as “Defence partnerships that act as force multipliers of military capability”, (Lemahieu and Leng, 2021, p. 23). Because Meta Platforms does not have military capability and does not take part in military-like partnerships, Meta Platforms would have no strength under this measure.

Diplomatic Influence

Within this power measure, the Asia Power Index examined diplomatic network, multilateral power, and foreign policy with a total of 15 indicators to inform this measure. The fact that Meta Platforms is not a nation-state excludes it from most variables in this measure.

Cultural Influence

Within this power measure, the Asia Power Index examined cultural projection, information flows, and people exchanges with a total of 15 indicators to inform this measure. Under the sub-measure of cultural projections, for the indicator Online Search Interest, defined as “Online interest for a given Index country in 24 other Index countries; average percent of total Google and Baidu searches for selected countries”. For this indicator, the average of all 26 index countries’ google search percentages for “Facebook” (Meta Platforms is a rebrand and is too new of a term so it has not caught on yet) was used.

Scoring of Data

The Lowy Asia Power Index provides scores and ranks for each of the 26 index countries, as well as scores and ranks for each of the indicators and sub indicators across their eight thematic measures. Because the scores and ranks are based off percentages or actual figures for each data point, as data were collected for Meta Platforms, it was possible to use figures or percentages and align them with the Asia Power Index's scoring system by adhering to the Index's weighting and normalizing system. For example, for the GDP data point (where Meta Platforms' Annual Revenue was used), figures were listed for this data point in dollars for each of the 26 index countries. I was able to place Meta Platforms' \$117,929 million within the spectrum of other countries' GDPs.

Before actually assigning points to Meta Platforms for each data point, the scores for each data point were normalized in order to adhere to the calculation system used on the Asia Power Index. In a personal communication (2022) from a Lowy Institute Research Assistant, the following is how scores are calculated for the Asia Power Index:

“The way that we calculate the scores for the Asia Power Index is to set it on a scale from 0-100 (normalised value, multiplied by 100) at the indicator level. These are then added up (depending on the weighting) to obtain the sub-measure score (for example the 63.4 for United States' International leverage score). After this, it takes a three year high (starting from the 2019 edition), and again places it on a scale from zero to 100. For International Leverage, the largest score was 63.7 in the 2020 edition of the Asia Power Index, and therefore received 100 in its edition. As a result, the 63.4 for the 2021 edition normalised value ended up being 99.4. This is done to show the change in the relative strength of a nation.”

Once each data point for Meta Platforms was assigned, that data point score was normalized with the following calculation: $(x - \min / \max - \min * \text{highest normalized score on Asia Power Index})$. Generally, the formula for normalization would be $(x - \min / \max - \min * 100)$, however, because the Lowy Institute scaled their scores twice (once for normalization,

and then again from a three-year high), the highest normalized score on the Asia Power Index was used for each indicator. This formula was used to check calculations for each indicator, testing to see if the formula used would replicate scores on the Asia Power Index for any given nation-state. The scores were all accurate within a $1/10^{\text{th}}$ of a point (in scores ranging from 0-100), showing that this formula was sufficiently accurate.

After scores were normalized, the Asia Power Index's weighting was used for each of the eight measures of power, including weighting for indicators and sub-indicators within those eight measures (measures, indicators, sub-indicators, and weights are detailed above in the Lowy Institute Asia Power Scale Description).

Research Questions

How do non-state actors rate, when compared with nation-states, in calculations of national world power, especially considering changing sources of power enabled by technology? In order to answer this question, the following research questions are asked:

Research Question 1 (R1): How does Meta Platforms rate in calculations of national world power if compared to nation-states today?

Research Question 2 (R2): What types of power help non-state actors, such as Meta Platforms, compete with nation-states?

Research Question 3 (R3): What power exists within Meta Platforms that is stronger than what the nation-states have?

Research Question 4 (R4): What would an accurate power index calculation for non-state actors and nation-states alike look like?

Research Question 1 Methods

The first research question (R1) asks how Meta Platforms rates in calculations of national world power if compared to nation-states today. Meta Platforms is used as a case study to examine how a non-state actor rates in calculations of national world power if compared to other nation-states today. Applying the Lowy Institute Asia Power Index to Meta Platforms allows for a type of comparison of Meta Platforms' power to nation-state power. The Lowy Institute Asia Power Index is used to calculate power by applying Meta Platforms data to the Asia Power Index indicators.

Research Question 2 Methods

The second research question (R2) asks what types of power help non-state actors, such as Meta Platforms, compete with nation-states. In order to answer this question, the literature on nation-state power and non-state actor power was examined to discover what types of power are unique to non-state actors, specifically entities similar to Meta Platforms. A technopolitical lens helped refocus this discussion on contemporary types of power, rather than reverting to a focus on traditional realist and liberalist ideas of power. Additionally, many of the details for this work are explained in the methods for research question.

Research Question 3 Methods

The third research question (R3) asks what power exists within Meta Platforms that is stronger than what the nation-states have. Results from R1 and R2 were combined, as well as reference to literature to explore R3. By examining results from R1, which applies the Asia Power Index to data on Meta Platforms, it was possible to calculate a subset of Meta Platforms' strengths over nation-states. R2 also provided a big-picture idea of general non-state actor strengths over nation-states. Lastly, literature on Meta Platforms' strengths allowed this question

to be answered in a way that is specific to Meta Platforms, rather than broadly for all non-state actors or those like Meta Platforms.

Research Question 4 Methods

The fourth research question (R4), asks what an accurate power index calculation for non-state actors and nation-states alike would look like. R4 was answered using the results from R1-3 and referring to literature. A particular focus surrounded technopolitics, as it helped suggest what an accurate power index calculation would look like for non-state actors against nation-states.

R1-3 provided evidence of missing power categories or indicators among current power indexes and measurements. A technopolitical lens helped refocus this discussion on contemporary types of power, rather than reverting to a focus on traditional realist and liberalist ideas of power.

Summary

This section detailed the methodology used to answer the four research questions in this dissertation. There is a highlight of the Asia Power Index, which is the index used to answer research questions in this dissertation. The discussion on the Asia Power Index provides explanation for its suitability in measuring non-state power as well as a description of the application of the Asia Power Index to Meta Platforms, providing contextual examples for how research questions were answered. The next section, Results, will provide scores and overall results for each of the four research questions in this dissertation.

CHAPTER 6 Results for RQ 1-3

Introduction

The following section presents the outcomes of the first three research questions of this dissertation, with the fourth research question's findings reserved for the subsequent chapter. Detailed is the evaluation of world power, particularly in relation to how non-state actors rate, when compared with nation-states, especially considering changing sources of power enabled by technology.

Understanding how non-state actors rate in comparison to themselves and other nation-states is not well understood. Whenever the question of global influence arises, the default response is invariably focused on nation-states. The data showcased in this section encourage discourse enables the evaluation of the capacity of non-state actor entities to exert substantial global power. Insights are offered concerning how non-state actor entities employ their power relative to nation-states and outlines potential methods for measuring such power. If non-state actor power is not measured, we will continue to assume nation-states hold all the power, which is not necessarily the case.

Specifically, results from this section provide information about how Meta Platforms rates against nation-states by using a nation-state-centric power index. Results also highlight types of power non-state actors hold, from vast wealth and resources, to non-territoriality, to advanced technology—helping them compete with nation-states for world power. Some types of power discovered for non-state actors are stronger than what nation-states hold, emphasizing the importance of measuring non-state actor power. Results also suggest features of power indexes and weighting adjustments that would be more accurate for measuring non-state actor power and nation-state power alike. This section ends with a new power index created based off non-state

actor and nation-state types of power, especially focusing on types of power that stem from technology. The objective of this index is to serve as a tool for assessing global power, with a focus on incorporating evaluations of the power of non-state actors in relation to other non-state actor entities and nation-states.

In order to answer how non-state actors rate, when compared with nation-states, in calculations of national world power, especially considering changing sources of power enabled by technology, the following three research questions were examined (the fourth is in the following chapter), using Meta Platforms as a case study to apply to the questions:

Research Question 1 (R1): How does Meta Platforms rate in calculations of national world power if compared to nation-states today?

Research Question 2 (R2): What types of power help non-state actors, such as Meta Platforms, compete with nation-states?

Research Question 3 (R3): What power exists within Meta Platforms that is stronger than what the nation-states have?

R1 Results

R1: How does Meta Platforms rate in calculations of national world power if compared to nation-states today?

In order to assess non-state actors' position concerning national global power, particularly in light of the evolving technological landscape, a crucial consideration is examining a non-state actor featuring technological power. Therefore, examining the potential rating of Meta Platforms, a multinational technology conglomerate, serves as an excellent initial step.

Meta Platforms is one of the largest and most influential international companies in the world. Encompassing multiple platforms such as Facebook, Instagram, and WhatsApp, Meta Platforms' power over society and the economy is significant. Using Meta Platforms as a case study to measure an MNC's power against nation-state power provides a valuable calculation of the possible power of a non-state actor.

In order to address R1, how Meta Platforms rates in calculations of national world power when compared to nation-states, data were collected about Meta Platforms for each of the Lowy Institute Asia Power Index's 131 data points for 2021. Each of the indicators were assigned a weight by the Lowy Institute, with weights in the eight power measures as follows: Economic Resources weighted at 17.5 percent; Military Capability weighted at 17.5 percent; Resilience weighted at 10 percent; Future Resources weighted at 10 percent; Economic Relationships weighted at 15 percent; Defense Networks weighted at 10 percent; Diplomatic Influence weighted at 10 percent; and Cultural Influence weighted at 10 percent.

Due to the Index's nation-state centricity, it was not possible to collect data for 49 out of the 131 indicators (37.4 percent) (see Appendix Table A.1 and Table A.3 and for details) for Meta Platforms. As mentioned in Chapter 5 Methods, if a data point was not applicable to Meta Platforms, Meta Platforms received a null-zero for that category. This approach was adopted to ensure that the calculations were more cautious and not overly optimistic, thereby avoiding overestimation of Meta Platforms' power.

It was possible to collect data on Meta Platforms for 82 of 131 indicators (62.59 percent) in the Asia Power Index. The remaining 49 indicators that were not able to be collected resulted in null zeros (see Chapter 5 for more on null vs earned zeros). Of the 82 indicators collected, 35 (42.68 percent) resulted in an earned zero out of 100. Although these indicators were all

technically measurable, 41 of the 81 indicators (50.61 percent) were not inclusive of non-state actor power (i.e. Nuclear Weapons Capability – Only nation-states have nuclear weapons. However, because Meta Platforms has no nuclear weapons, this is technically measurable as an earned zero nuclear weapons for Meta Platforms. This indicator is not inclusive for non-state actors). Overall, Meta Platforms received 84 zero scores (49 of which were null zeros) out of 131 indicators (61.12 percent) (see appendix Table A.3 for full data on null versus earned zeros).

Table 6.1.1 Measurable and non-measurable indicators

Measurable Indicators	Non-measurable Indicators	Indicators that are measurable, but not inclusive for non-state actors	Zero scores for Meta Platforms	Earned Zeros for Meta Platforms	Null Zeros
82 /131	49 /131	41 /81	84	35	49

Comprehensive Power Level (Overall score)

The Asia Power Index’s Comprehensive Power Level is an overall score which can serve as a means of comparing Meta Platforms’ power with nation-state power on the Asia Power Index. Meta Platforms received an overall score of 12.96 out of 100 for comprehensive power—a weighted average across the Index’s eight power measures. This ranked Meta Platforms 17 compared to 26 index countries, scoring just above North Korea at 11.5 and just below the Philippines at 13.1. The highest scoring nation-state for comprehensive power in the Asia Power Index for 2021 was the United States, scoring 82.2, with the second highest as China at 74.6, and the lowest scoring nation-state as Papua New Guinea at 3.7. The Asia Power Index categorizes its countries in the Comprehensive Power Level as Super Powers (with 70 or more points), Middle Powers (with 10 or more points), and Minor Powers (with less than 10 points). Only two

countries, the United States and China, are listed as Super Powers under Comprehensive Power. Fifteen countries scored as Middle Powers, and nine countries score as Minor Powers. Meta Platforms' Comprehensive Power score places it within Middle Powers, meaning Meta Platforms' power, as a non-state actor, measures similarly to the majority of countries on the Asia Power Index.

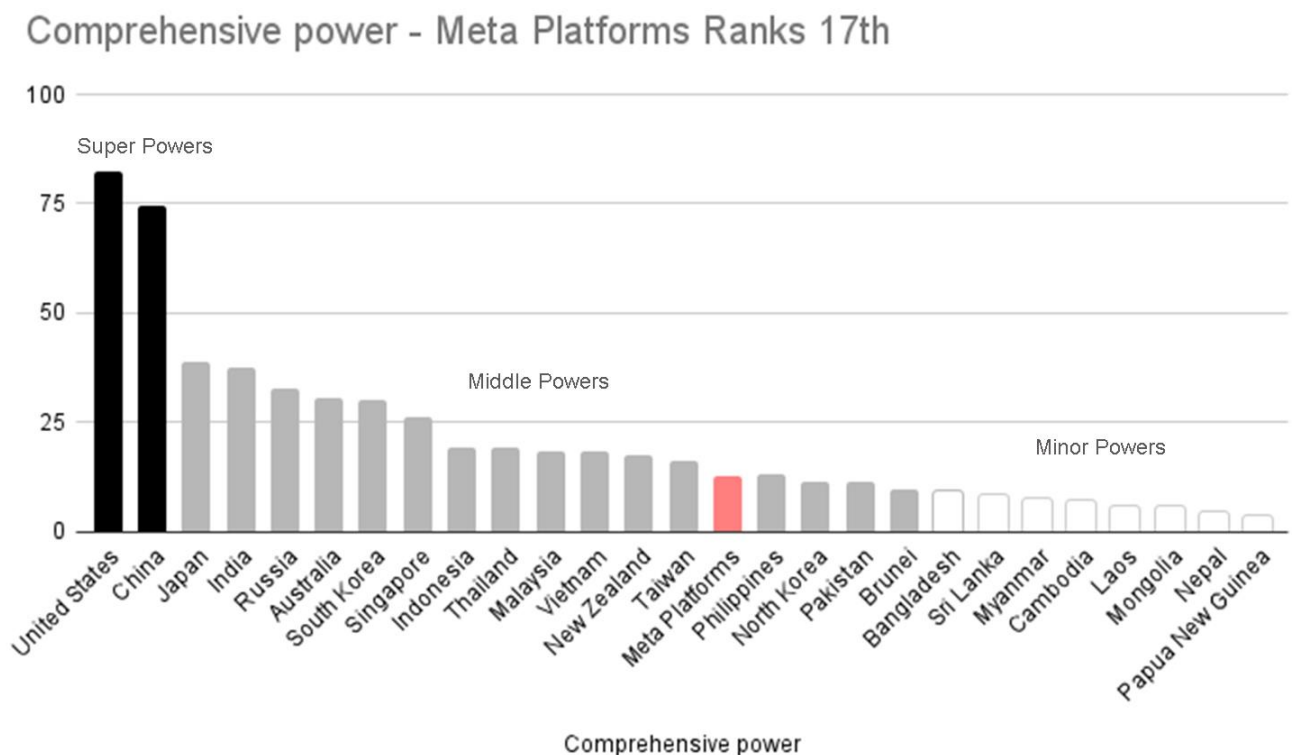


Figure 6.1 Meta Platforms Comprehensive Power Ranking

Eight Power Measure Levels (Thematic Measures)

In answering RQ1, how does Meta Platforms rate in calculations of national world power if compared to nation-states today, it is helpful to not just look at overall comprehensive power, but also to look at which components make up that comprehensive power. Meta Platforms is stronger in some areas than others, and by looking at the eight Power Measures, it is possible to

see where Meta Platforms’ strengths and weaknesses lie. Scores for Meta Platforms fluctuated drastically among the 8 power measures; for example, Meta Platforms ranked third in the Cultural Influence measure and fourth in the Future Resources measure, but 26th in Economic Relationships, Defense Networks, and Diplomatic Influence measures. Results for each measure are listed and described below (see Appendix Table A.1 for more details).

Economic
Resources: Meta
Platforms scored 7.33 out
of 100 points, ranking it
13th out of 26 countries for
this measure. This score is
the same as Vietnam, thus
it places just above New
Zealand and just below

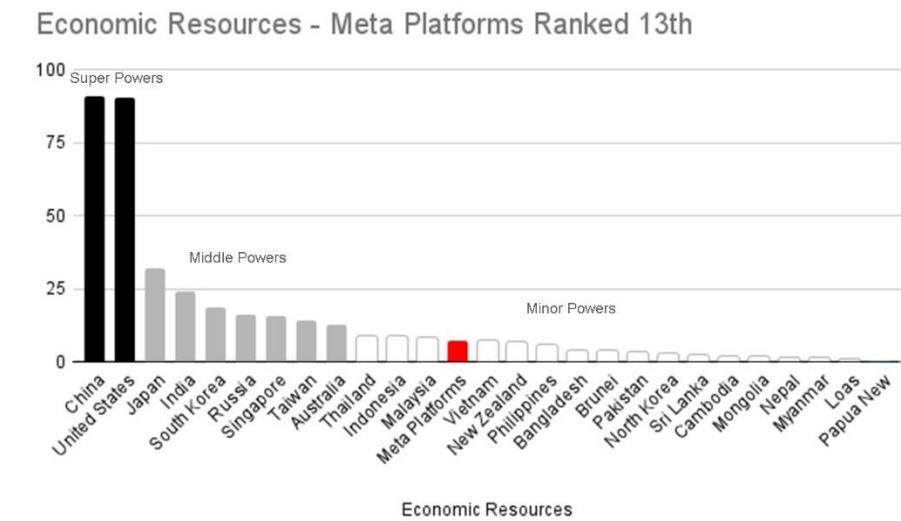


Figure 6.2 Meta Platforms' Ranking in Economic Resources

Malaysia. The highest-ranking nation-state for this measure was China at 91.2 and the lowest ranking nation-state for this measure was Papua New Guinea at 0.2. Out of the 21 indicators which make up this measure, six were not applicable to Meta Platforms and thus resulted in a null zero score.

Military Capability:

Meta Platforms scored 3.36 out of 100 points, ranking it 21st out of 26 countries for this measure. This ranks Meta Platforms just above Mongolia and just below Bangladesh for this measure.

The highest-ranking nation-

state for this measure was the United States at 91.7 and the lowest ranking nation-state for this measure was Papua New Guinea at 0.1. Out of the 22 indicators which make up this measure, two were not applicable to Meta Platforms, resulting in a null zero score. However, Meta Platforms achieved an earned zero in all the other applicable indicators in this measure due to poor performance, except one indicator: training, readiness and sustainment.

Military Capability - Meta Platforms Ranked 21st

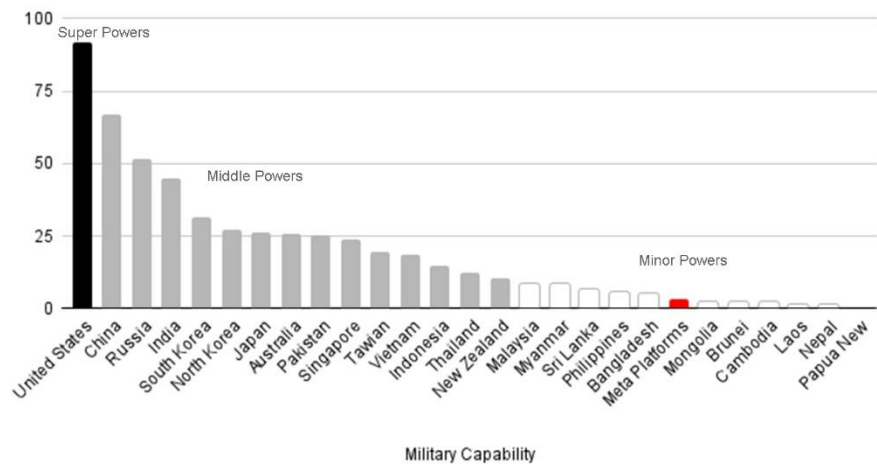


Figure 6.3 Meta Platforms' Ranking in Military Capability

Resilience: Meta

Platforms scored 18.83 out of 100 points, ranking it 24th out of 26 countries for this measure. This ranks Meta Platforms just above Laos and just below Myanmar for this measure.

Resilience - Meta Platforms Ranked 24th

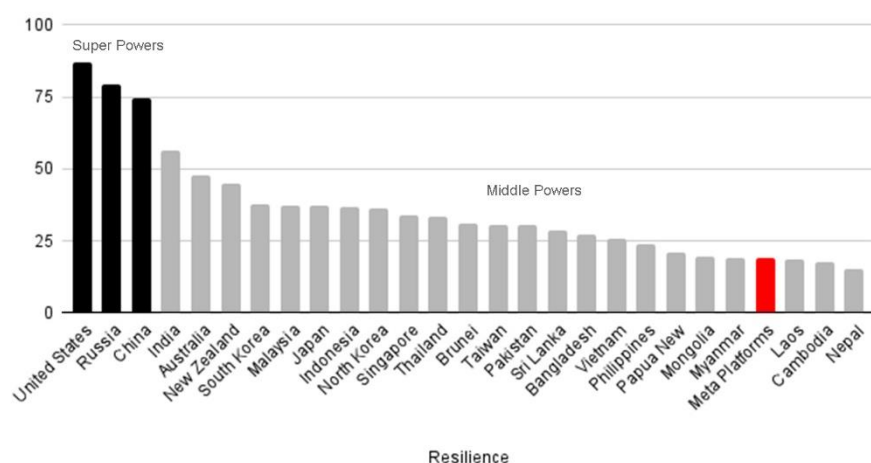


Figure 6.4 Meta Platforms' Ranking in Resilience

The highest-ranking nation-state for this measure was the United States at 86.9 and the lowest

ranking nation-state for this measure was Nepal at 15.3. Out of the 25 indicators for this measure, only three were not applicable to Meta Platforms. This means that Meta Platforms just scored quite poorly on the 22 indicators in this measure, relative to other nation-states in the index.

Future Resources: Meta Platforms scored 37.4 out of 100 points, ranking it 4th out of 26 countries for this measure. This ranks Meta Platforms just above Russia and just below India for this measure. The highest-

ranking nation-state for this measure was the United States at 80.5 and the lowest ranking nation-state for this measure was Papua New Guinea at 0.2. All seven indicators which make up this measure were applicable to Meta Platforms. Meta Platforms still received an earned zero for two of the indicators due to poor performance for those indicators.

Economic Relationships: Meta Platforms scored 0.21, ranking it 26th out of 26 countries for this measure. This ranks Meta Platforms just above North Korea (which also ranked 26, but had a score of zero) and

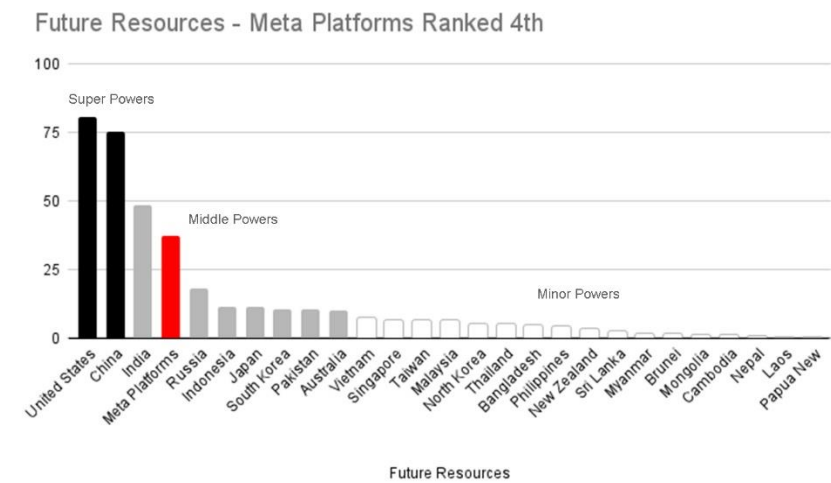


Figure 6.5 Meta Platforms' Ranking in Future Resources

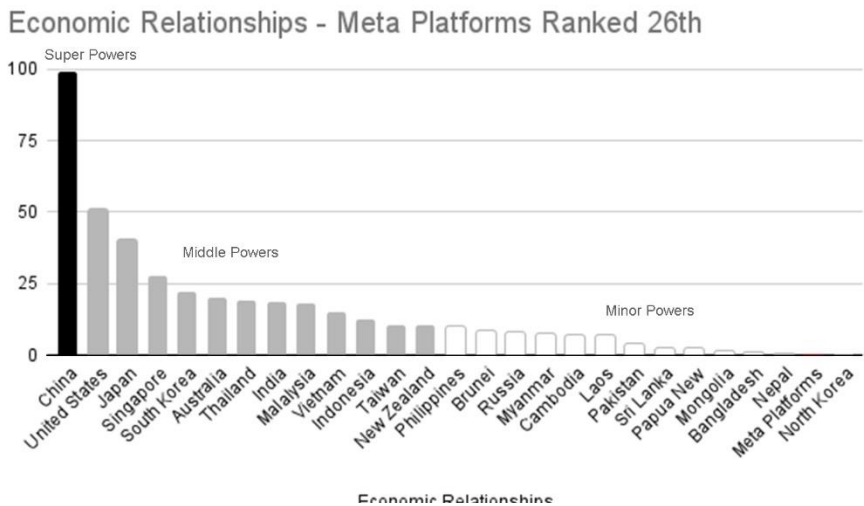


Figure 6.6 Meta Platforms' Ranking in Economic Relationships

just below Nepal (which also ranked 26, but had a score of 0.5) for this measure. The highest-ranking nation-state for this measure was China at 99.0 and the lowest ranking nation-state for this measure was North Korea at zero. Out of the 12 indicators which make up this measure, four were not applicable to Meta Platforms, resulting in a null zero score. For the eight indicators which were applicable to Meta Platforms, all but one indicator, trade with region, received an earned zero score (trade with region only received a 0.6 score, making it rather close to a zero score anyway).

Defense Networks:

Meta Platforms scored zero out of 100 points, ranking it 26th out of 26 countries for this measure. Out of the 14 indicators from which Defense Networks was composed, 12 indicators were not applicable to Meta

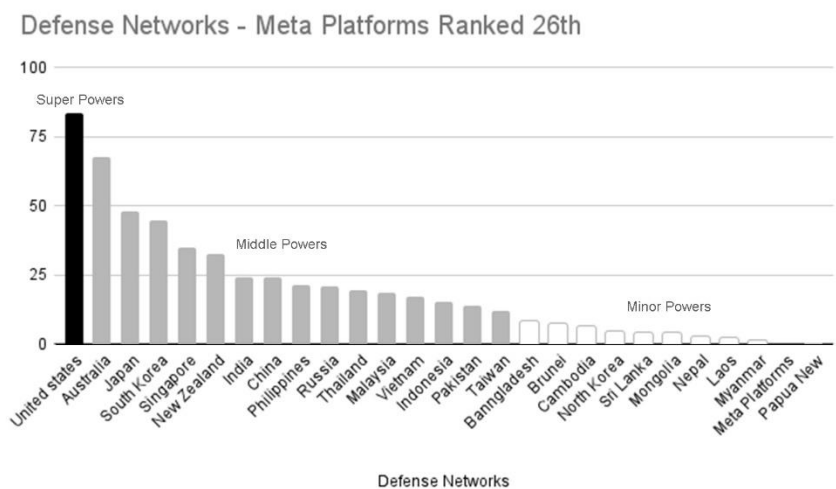


Figure 6.7 Meta Platforms' Ranking in Defense Networks

Platforms, therefore null zeros. For the two indicators that were applicable to Meta Platforms, the company still achieved an earned zero score due to weakness in those areas. This ranked Meta Platforms the same as Papua New Guinea (which also ranked 26 with a score of zero) and below Myanmar for this measure. The highest-ranking nation-state for this measure was the United States at 83.4 and the lowest ranking nation-state for this measure was Papua New Guinea at zero.

Diplomatic

Influence: Meta Platforms

scored zero out of 100

points, again due to the

non-applicability of these

measures for Meta

Platforms. Thus, Meta

Platforms received 15 null

zeros in this measure,

ranking it 26th out of 26 countries. This ranks Meta Platforms far below all other countries for this measure. The highest-ranking nation-state for this measure was the United States at 90.4 and the lowest ranking nation-state for this measure was Papua New Guinea at 11.3. None of the 15 indicators under Diplomatic Influence were applicable to Meta Platforms, explaining the poor score for this measure.

Cultural Influence: Meta Platforms scored 54.35 out of 100 points, ranking it 3rd out of 26 countries for this measure. This ranks Meta Platforms just above Japan and just below China for this measure. The highest-ranking nation-state for this measure was the United States at 85.0 and the lowest ranking nation-state for this measure was

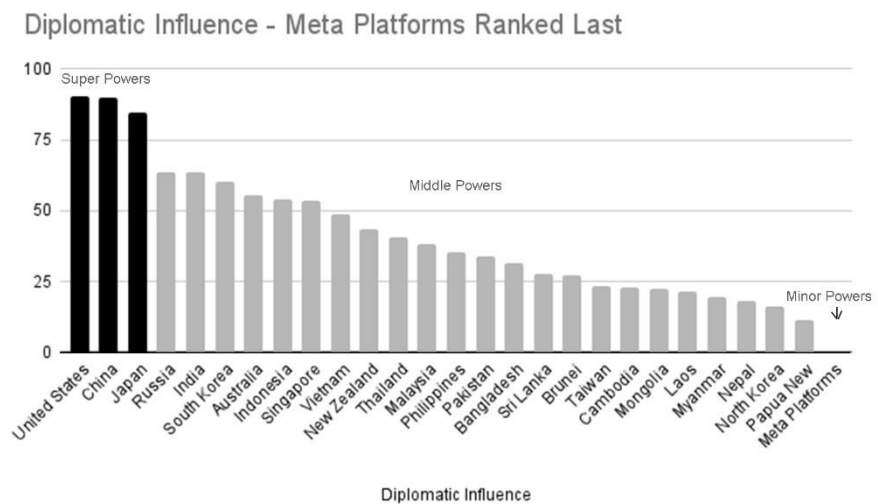


Figure 6.8 Meta Platforms' Ranking in Diplomatic Influence

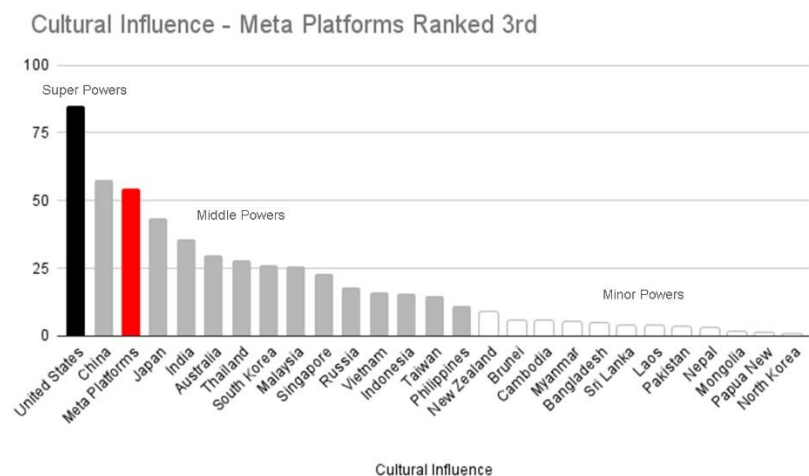


Figure 6.9 Meta Platforms' Ranking in Cultural Influence

North Korea at 0.5. Out of the 15 indicators which make up this measure, seven indicators were not applicable to Meta Platforms, resulting in null zeros. For five of the remaining eight applicable indicators, Meta Platforms received an earned zero for scoring poorly. Despite receiving zeros for 12 of the 15 indicators for this measure, Meta Platforms still placed as the second-highest Middle Power on the Asia Power Index.

The composite scores shown in the table below summarize how Meta Platforms rates in comparison to other nation-states in the Asia Power Index. The table recapitulates above-mentioned scores for each of the eight power measures in the Asia Power Index, as well as a total weighted score (explained above in this section under R1).

Table 6.2 Meta Platforms Scores and Ranking in Asia Power Index Measures

Meta Platforms Scores and Ranking in Asia Power Index Measures				
8 Measures	Weight	Total	Weighted total	Rank
Economic resources	17.50%	7.33	1.28275	#13 rank (same as Vietnam, above New Zealand, below Malaysia)
Military capability	17.50%	3.3612	0.58821	#21 (above Mongolia, below Bangladesh,)
Resilience	10%	18.83	1.883	#24 (above Laos, below Myanmar)
Future resources	10%	37.419	3.7419	#4 (above Russia, below India,)
Economic relationships	15%	0.21	0.0315	#26 (above North Korea, below Nepal,)
Defense networks	10%	0	0	#26 (same as Papua New Guinea, below Myanmar)
Diplomatic influence	10%	0	0	#26 (lowest of all by far, below Papua New Guinea)
Cultural influence	10%	54.35	5.435	#3 (above Japan, below China)
Weighted score		TOTAL	12.96236	#17 (above North Korea at 11.5, below Philippines at 13.1)

Sub-Measures

As noted earlier, the Asia Power Index consists of eight measures of power, with 30 total thematic sub-measures under those measures.

Highest scores

Of the 30 Asia Power Index sub-measures, Meta Platforms' score of 100 out of 100 placed them above all of the countries except India (who also received a 100) in Demographic Resources 2050 (under the Future Resources measure), defined as "Demographic variables expected to contribute to future GDP beyond 2030". This is the only sub-measure in which Meta Platforms scored the full 100 points and the only sub-measure in which Meta Platforms scored higher than all countries on the index (except India, which also scored 100 points for this sub-measure). The next highest nation-state score was the United States, at 52.4 points. China followed the US, scoring 45.5 points, and the rest of the index countries scored ranges from 19.2 to zero.

Lowest Scores

Meta Platforms' lowest scores were zero out of 100 points in 14 sub-measures listed below. However, in each sub-measure, at least one nation-state also scored a zero. There was no sub-measure in which only Meta Platforms scored a zero. These sub-measures which resulted in zeros include a combination of earned zeros and null zeros for individual indicators. As a result, earned versus null zeros will not be called out for this section, but referring to the Appendix Table A.3 provides details on zeros for individual indicators).

Military Capability Sub-Measures

Defense Spending: This sub-measure is defined as "Annual expenditure allocated to maintaining, renewing, replacing and expanding military capability". Countries that also scored a zero for this measure include Mongolia, Papua New Guinea, and Laos.

Weapons and Platforms: This sub-measure is defined as "Land, maritime and air warfare assets and capabilities". The only nation-state that also scored a zero for this sub-measure was Nepal.

Signature Capabilities: This sub-measure is defined as “Capabilities that confer significant or asymmetric tactical and strategic advantages in warfare”. The only nation-state that also scored a zero for this sub-measure was Cambodia.

Asian Military Posture: This sub-measure is defined as “Ability to deploy rapidly and for a sustained period in the event of an interstate conflict in Asia”. The only nation-state that also scored a zero for this sub-measure was Papua New Guinea.

Resilience Sub-Measures

Nuclear Deterrence: This sub-measure is defined as “Nuclear forces that can be used strategically to deter potential aggressors by threatening a retaliatory nuclear strike”. Nineteen countries also scored a zero for this measure including Papua New Guinea, Nepal, and New Zealand.

Defense Resources 2030: This sub-measure is defined as “Estimated future defense spending and military capability enhancements”. Countries that also scored a zero for this measure include Mongolia, Laos, and Papua New Guinea.

Economic Relationships Sub-Measures

Regional Investment Ties: This sub-measure is defined as “Ability to influence other countries through foreign direct investment flows and relative”. The only nation-state that also scored a zero for this sub-measure was North Korea.

Economic Diplomacy: This sub-measure is defined as “The use of economic instruments to pursue collaborative interests and beneficial geopolitical outcomes”. The only nation-state that also scored a zero for this sub-measure was North Korea.

Defense Networks Sub-Measures

Regional Alliance Network: This sub-measure is defined as “Number, depth and combined strength of defense alliances in the region”. Sixteen countries also scored a zero for this measure, including India, Nepal, and Papua New Guinea.

Regional Defense Diplomacy: This sub-measure is defined as “Diversity and depth of defense diplomacy in the region”. The only nation-state that also scored a zero for this sub-measure was Papua New Guinea.

Diplomatic Influence Sub-Measures

Diplomatic Network: This sub-measure is defined as “The regional and global reach of a nation-state’s or territory’s diplomatic offices”. The only nation-state that also scored a zero for this sub-measure was Papua New Guinea.

Multilateral Power: This sub-measure is defined as “A state’s or territory’s participation and influence in multilateral forums and organizations”. The only nation-state that also scored a zero for this sub-measure was Taiwan.

Foreign Policy: This sub-measure is defined as “The ability of government leaders and foreign policy bureaucracies to advance their state’s or territory’s diplomatic interests”. The only nation-state that also scored a zero for this sub-measure was Myanmar.

Cultural Influence Sub-Measures

People Exchanges: This sub-measure is defined as “The depth and influence of a nation-state’s people-to-people links in the region”. The only nation-state that also scored a zero for this sub-measure was North Korea.

Low Outliers

While Meta Platforms scored zero on 14 of the above sub-measures, the following two sub-measures in which Meta Platforms scored a zero were particularly low outliers for Meta Platforms. Even though Meta Platforms was accompanied by a nation-state with the same score of zero for these two sub-measures, there was a large gap (of over five points) in distribution of scores, where Meta Platforms and the other zero-scoring nation-state were outliers in comparison to the other countries on the index. The following two sub-measures were low outliers for Meta Platforms:

Diplomatic Influence Sub-Measures

Multilateral power: This sub-measure is defined as “A state’s or territory’s participation and influence in multilateral forums and organisations”. Meta Platforms scored zero along with Taiwan. The next lowest scoring nation-state is North Korea at 20.1 showing the substantial gap between Meta Platforms and Taiwan and the other countries.

Diplomatic network: This sub-measure is defined as “The regional and global reach of a state’s or territory’s diplomatic offices”. Meta Platforms scored zero along with Papua New Guinea; the next lowest scoring nation-state was Nepal at 7.4, which although not as much of a difference as the scores for multilateral power, still show a gap between Meta Platforms and Papua New Guinea and the other countries. All other gaps between Meta Platforms’ low scores and other nation-state low scores remain under six points difference, which were not classified as low outliers for this study.

Indicator Measures (131 Indicators)

As mentioned, the Lowy Institute Asia Power Index consists of eight measures of power, 30 thematic sub-measures and 131 indicators. Within each of the eight power measures, there are 131 total indicators for which Meta Platforms received individual scores. These indicators are precise data points which are combined in categories to make up the sub-measures. Meta Platforms scored the highest compared to other countries in the Index in the following indicators:

Extreme Highs

Technology Sub-Measures (within the Economic Capability Measure)

Productivity: This sub-measure is defined as “GDP output per worker”, and as noted in Chapter 5, is calculated by revenue divided by number of employees. The result was \$ 1,638,585 per Meta Platforms worker. This result is far higher (1339.94 percent higher) than the highest nation-state’s output per worker, with Australia ranking 1st at \$113,795 per worker.

R&D Spending: This sub-measure is defined as “gross domestic expenditure on R&D as a share of GDP”. This was calculated by R&D expenditure as share of Meta Platforms’ annual Revenue. The result was 20.9 percent, which the highest on the Asia Power Index scale, where the highest nation-state score was South Korea at only 4.5 percent.

Cultural Projection Sub-Measures (within the Cultural Influence Measure)

Online Search Interest: This sub-measure is defined as “Online interest for a given Index nation-state in 24 other Index countries; average percent of total Google and Baidu searches for selected countries (2020)”. This was calculated through an average of all 26 index countries google search percentages for the term “Facebook” for 2020. The result was 76.93 percent, where the highest score for a nation-state on the Asia Power Index was Japan at 19.2 percent.

Extreme-to-Moderate Lows

Meta Platforms' lowest scores did not have as big of a margin of difference as the highest scores had, meaning Meta Platforms' strengths can be more impactful than the detriments of Meta Platforms' weaknesses. In examining indicators that were applicable to Meta Platforms, there was no indicator in which Meta Platforms was the only recipient of a zero score. In every case where Meta Platforms scored a zero, there was always at least one nation-state on the index that also scored a zero. In fact, out of 131 indicators, there were only four indicators where no nation-state scored a zero: Infant Mortality (with Pakistan as the lowest score at 2.7), Dependency on Global Trade (with Singapore as the lowest score at 2.2, Dependency on Primary Trade Partner (with Mongolia as the lowest score at 29.6), and Estimated Broad Resources 2030 (with Papua New Guinea as the lowest score at 4.8. In none of those cases did Meta Platforms score a zero. The following are examples of low outlier scores for Meta Platforms (and an accompanying low-scoring nation-state). They are highlighted because they contrast with the distribution of the rest of the countries' scores on the Asia Power Index.

Diplomatic Network Sub-Measures (within the Diplomatic Influence Measure)

Embassies (Regional): This sub-measure is defined as “Number of embassies, high commissions and permanent missions in Index countries (2021)”. Meta Platforms and Taiwan scored a zero, where the next lowest score was Papua New Guinea at 44.4 points.

Resource Security Sub-Measures (within the Resilience Measure)

Energy Trade Balance: This sub-measure is defined as “Net energy exports in million tonnes of oil equivalent, Mtoe (2020)”. Meta Platforms and Singapore scored zero, where the next lowest score was Japan at 24.6.

Fuel Security: This sub-measure is defined as “Deficit of refined petroleum as a proportion of GDP (2020)”. Meta Platforms and Cambodia both scored a zero, while the next lowest was Mongolia at 13.3.

Energy Self Sufficiency: This sub-measure is defined as “Primary energy production as a share of total primary energy use (2020)”. Meta Platforms and Singapore both scored a zero, where the next lowest is Taiwan at 9.2.

Nation-State Similarities

For individual Indicators and Sub-Measures, most frequently Meta Platforms scored most similar (mode) to Papua New Guinea, then Nepal, then India. If eliminating indicators that were not applicable to Meta Platforms (but still include zero scores), Meta Platforms scored the same or similar score most often (mode) to Nepal, then Papua New Guinea, then India.

Table 6.3 Meta Platforms Similarity to Countries on the Asia Power Index

Meta Platforms Similarity To Countries On The Asia Power Index		
	Similar Score On All Indicators And Sub-Measures	Similar Score to All Applicable Indicators and Sub-Measures
1st	Papua New Guinea	Nepal
2nd	Nepal	Papua New Guinea
3rd	India	India

R2 Results

R2: What types of power help non-state actors, such as Meta Platforms, compete with nation-states?

Research question two asks what types of power help non-state actors, such as Meta Platforms, compete with nation-states. In order to answer this question, literature on nation-state

power and non-state actor power was examined. This literature provided insights into what types of power are unique to non-state actors, specifically entities similar to Meta Platforms. A technopolitical lens helped focus this discussion on contemporary types of technological power, rather than reverting to a typical focus on realist and liberalist ideas of power.

In answering RQ2, a literature review resulted in identifying three overarching types of power which are unique to non-state actor entities such as Meta Platforms. These three types of power are wealth and resources power, non-locational power, and technological advantage power. Each of these powers is composed of multiple key characteristics that help increase this power. Each of these three powers, along with their key characteristics, are detailed below.

Wealth and Resources

Although nation-states do have wealth and resources, the wealth and resources under non-state actors, especially MNCs are unique, particularly concerning their use and the characteristics that proliferate this wealth and resources. Key characteristics which increase non-state actor wealth and resources include evading regulations, political and lobbying power, litigation power and colonial behaviors which aggravate economic disparity worldwide.

Multinational corporations can have wealth and resources that are not just comparable to nation-states, but that overshadow many less-developed nation-states. Engle (2004) notes that 51 percent of the world's largest 100 economies are corporations, while the other 49 percent are nation-states. Furthermore, 27.5 percent of the world's economic activity is made up by the largest 200 corporations (Engle, 2004). Additionally, in the US, the largest corporations benefit greatly from economic programs, such as loans, tax breaks, and bailout assistance (Yeganeh, 2020), providing them with benefits without having to face the same level of consequences and hardships as small businesses and individuals.

The largest multinational conglomerates have amassed such wealth that they are able to escape nation-state laws by evading regulations through manipulating politics and wielding unmatched lobbying power. These multinational conglomerates thrive on buying out their competition and creating a reliance on their technological platforms (Maggor, 2021).

Evading Regulations

Large MNCs use their extravagant resources to evade or manipulate the law (Yeganeh, 2020). They can conjure up extensive oversight boards (D’Cunha, 2003), establish fact-checking teams (Gross and Manjoo, 2017), and develop any other solutions necessary to keep their operations running, unhindered by regulations and laws that might plague less powerful entities and nation-states. These tactics to evade regulations allow large MNCs to continue building their wealth and resources, facilitating a cycle of prosperous growth.

One strategy these companies use to evade regulations includes replicating nation-state functions, such as producing public goods or managing labor issues (D’Cunha, 2021; Arts, 2003). By replicating nation-state functions, these MNCs become the regulators of those functions, leaving them to the luxury of self-regulation. Arts (2003) explains that multinational corporations “...have taken over all kinds of functions that were formerly attributed to and executed by states; for example, the production of certain public goods (water supply, transport, telecommunication), the redistribution of wealth (investments in developing countries) and the management of labour issues (from tripartite to bilateral arrangements). As a consequence, authority in the global political economy has been diffused, leaving NSAs with considerable power” (p 31). D’Cunha (2003) provides an example for Meta Platforms, which has an Oversight Board likened to the United States Supreme Court. The board takes on cases and provides rulings according to their “community standards” and values. This board creates a façade of

responsibility and deters media and policymakers' from scrutinizing Meta Platforms' activities. D'Cunha summarizes that this practices allows Meta Platforms and similar companies "...to publicly espouse human rights and democracy, apologise for what they claim were unforeseen consequences, promise to do better, and still shield themselves from any external audit of what they are doing" (p. 117).

When large MNCs fear they may be regulated on an issue, they often take it upon themselves to implement in-house fixes to prevent scrutiny on an issue that would eventually necessitate regulation. MNCs can create their own rules to create an air of high standards and regulation, deterring governments from inspecting their operations. One such issue concerns the regulation of speech or terrorism on social media platforms. Social media platforms, such as Facebook's news feed has been criticized for its lack of fact checking of news articles. Meta Platforms responded to this issue by implementing fact checking. This would mean that Meta Platforms would be the judge of true and false or right and wrong news read by billions of individuals. In an NPR interview (Gross and Manjoo, 2017), Farhad Manjoo notes that this puts Meta Platforms in a position "...something like the ministry of information for kind of every nation-state in which it operates...How it'll make those decisions and who it'll employ to make those decisions I think is a big question. And, like, suddenly it's going to have this power, and it's going to come about perhaps as a solution to another problem that it itself caused" (Gross and Manjoo, 2017, p. 1). Meta Platforms has implemented a third-party fact-checker program, the International Fact-Checking Network (IFCN) (Meta Platforms, 2021a). In order to create the image of impartiality. They explain that their network of fact-checking partners are independent, rating potential misinformation across Meta Platforms applications, such as Facebook, Instagram and WhatsApp, so they can then decide which information to remove or keep. Meta Platforms notes that the

main aim of the program is to target viral misinformation that is consequential (Meta Platforms, 2021a). Here, not only is Meta Platforms harnessing huge dissemination and gatekeeping powers, but it is also evading regulation from the governments through self-regulation. Once a non-state actor entity takes on the responsibility of a nation-state function, they can persuade or coerce others to adopt policies, making those non-state actor entities the authorities on the issue (Arts, 2003).

Political and Lobbying Power

If large MNCs cannot find ways to evade the laws, they can also make and change the laws. Large MNCs have extensive resources and wealth enabling them to manipulate governments. The largest tech companies are becoming progressively intertwined with political power and legislative influence (Yeganeh, 2020). Lobbying has become a huge tactic for multinational companies to gain more wealth and resources. Lobbying often includes altering anti-trust rules and tax regulations, as well as the promotion of libertarian views of non-regulation (Yeganeh, 2020; D’Cunha, 2021). The anti-regulation perspective stems from the Chicago School’s conviction that regulations hurt small companies because only large companies can afford to comply, meaning more regulation results in higher prices for consumers (D’Cunha, 2021). It is from this era that these huge companies were able to transform into wealthy monopolies.

Meta Platforms, Google, Microsoft and Amazon are among the companies who spend the most in lobbying expenditures in the US and EU (Meta, Google and Amazon are the highest for the US, Google and Microsoft are the highest for the EU). Meta Platforms spent \$19.68 million on lobbying in the United States, more than any other company in 2020, and Amazon came in as the second highest spender at \$17.86 million (Yeganeh, 2020; D’Cunha, 2021). These are only

disclosed expenditures, however, and do not include non-US expenditures or associated expenses such as lawyers and funding research (D’Cunha, 2021).

Arts (2003) notes that non-state actors’ (NSAs) importance in global policy-making is growing and is undervalued. They are not just lobbying, and they are not necessarily external to global governance, “Formally and informally, NSAs are increasingly a part of, and giving shape to, international networks of governance. True, they still lobby, but they are also invited by public authorities to sit at negotiation tables. Even more so, they design, implement and monitor inter- national policies themselves” (p. 10). Arts explains that this view transcends elitist statism, but also classical transnationalism, as NSAs cannot only engage in global governance, but they can create it even without governmental authority. In fact, non-state actors can also become important for peace making, where they may be able to obtain information that governments are unable to get access to (Wijninga et al., 2014).

Under technopolitics, new technology, especially the internet is now seen as an essential part of politics (Kurban, Peña-López and Haberer, 2017). Politicians and political organizations are able to use technology, especially digital platforms, to achieve goals in faster and more efficient ways than was previously possible. Kurban, Peña-López and Haberer (2017) explain some of the main mechanisms that drive political goals as creating ideas, prioritizing issues, and creation of content. New technology for communication and organization, precisely what we see big tech companies managing, is entwined in politics. Without integrating new technology, politicians would not be able to compete in today’s political processes. This means digital platforms have a new superpower—holding the keys to political processes. This creates a new type of power for these large corporations (Kurban, Peña-López and Haberer, 2017).

Politicians rely on the circulation of their legislation and the power that digital platforms hold in relation to this are profound—for example, adjusting an algorithm on Google or Facebook could send internet traffic away from a particular cause (D'Cunha, 2021). Not only can these platforms control internet traffic, but they could also potentially tamper with personal information and evidence. D'Cunha explains, “Politicians also depend on email, and recent evidence suggests Google's Gmail platform has arbitrarily promoted or disappeared candidates for public office. So long as such a possibility exists for a communication monopoly secretly to privilege or demote political speech, it is not illogical to assume a chilling effect on politicians” (D'Cunha, 2021, p. 124). An example of this is statement made in December 2022, where Meta Platforms threatened to remove United States news from its platform if Congress passed the Journalism Competition and Preservation Act. This legislation supports publishers’ negotiations of acquiring payments from social media platforms and search engines, a move that Meta Platforms does not support. A Meta Platforms representative posted a comment on this on Twitter stating, “If Congress passes an ill-considered journalism bill as part of national security legislation, we will be forced to consider removing news from our platform altogether rather than submit to government-mandated negotiations that unfairly disregard any value we provide to news outlets through increased traffic and subscriptions” (Bruell, 2022). At the time of writing this, the Bill has only been introduced, with no voting actions taken yet.

Multinational Corporations’ economic influence means they can lobby governments and affect policies that benefit them, such as increasing profits and deregulations. Evading laws, creating or changing laws, and influencing politics and politicians are all key characteristics of non-state actor power that allow them to continue building vast wealth and resources. Countries are held to different standards concerning evading laws, creating or changing laws, and

influencing politics and politicians. Countries typically modify their laws within established frameworks, which are frequently constrained by constitutional protections and legal boundaries. Furthermore, countries who evade international laws or agreements may face political and diplomatic backlash from other nations and global institutions, which may lead to the imposition of trade restrictions or sanctions aimed at shaping their actions. Additionally, countries can have different types of influence over politicians than non-state actors, such as resources and influence over domestic and international politics, which lets them shape the agendas of politicians (i.e. federal financial support for policies, diplomatic channels to advance interests). The modes and repercussions of non-state actors evasion of laws, creation and changing of laws, and influence of politics and politicians contrast the modes and repercussions of countries.

Litigation

The wealth and resources of large MNCs allow them the power to litigate in ways that nation-states do not have the capability to do. Large MNCs have the resources to function as “repeat players” in the legal system, with long-term, strategic goals that are unimpeded by short-term financial penalties or costs. These large MNCs thrive off serial litigation, by either settling, overturning, or delaying enforcement of regulation. Their vast resources, including teams of lawyers, researchers, lobbyists, and overall capital allow them to invest time and money into litigation in a way that nation-states cannot. D’Cunha (2012) explains,

“Although government in theory should be the ultimate repeat player, the powerful multinationals are the ones with an in-built resource and incentive advantage over would-be enforcers. Powerful companies act solely in self-interest, whereas the enforcing agency needs to weigh the political will for a prolonged dispute against the growing costs to the taxpayer the longer it drags on” (p. 122).

Nation-states are not afforded the luxury of allocating such a large portion of their resources to litigating MNCs. The resources that big tech companies hold often tower above the

entities that are tasked with regulating them or holding them accountable. Governments tasked with enforcing regulations against these giants needs to assess whether the issue at hand is important enough to dispute, given the time, resources, and money that it may take to administer. Oftentimes, these companies can hide their egregious evasions of the law by privatizing their disputes—they can suggest a settlement, which the enforcing entity understands can be less costly and less time consuming. A large portion of a nation-state's limited resources can be quickly squandered against the increasing resources of these tech giants. Problematically, not enforcing regulations usually allows a company to further increase its copious resources (D'Cunha, 2021). Nation-states, who are tasked with enforcing most MNC regulations, are currently trading expensive losses in courts for the uninhibited growth of large MNCs.

Colonial Behaviors and Aggravation of Economic Inequality Worldwide

The wealth and resources of non-state actors are powerful in their appeal to nation-states. Nations are enticed by multinational conglomerates with the hopes of boosting their economy through investments, new jobs, and an increase in development. This can create a reliance on multinational corporations, as nations (especially developing nations) may be willing to trade aspects of sovereignty in exchange for bettering their economy (Yeganeh, 2020). Multinational companies can especially prey on lower-income countries, as those countries not only desperately need economic advancement, but they also cannot defend themselves like larger countries can. Lower income countries, for example, cannot litigate like higher income companies—they do not have the resources to fight back against multinational corporations. Lower income countries do not benefit from multinational corporations' presence as much as the multinational corporations benefit. Yeganeh (2020) notes that, "As corporations are becoming more profitable, the profits are passed to the top executives and shareholders, whereas ordinary

workers do not benefit very much. In other words, the big corporations enrich the rich to the detriment of the poor and thus contribute to economic inequality” (p. 200). In addition, large MNCs have contributed to reducing unionization, where, “It is widely accepted that unionization plays an important role in creating shared prosperity and lower levels of income inequality (Brennan, 2016)” (Yeganeh, 2020 p. 200). This increase of income inequality and concentration of wealth and power simultaneously undermines democracy and human rights (Berezko, 2022).

The concentration of wealth contributes to a stagnation in economic growth, where there is decreased spending and lower demand. There is overall less spending power and more reliance on debt for essentials, where those debts often become unrepayable. Economic inequality can cause or exacerbate issues such as violence and health issues, decreasing well-being of everyone in a system, not just the lower income individuals (Yeganeh, 2020).

Multinational corporations’ exploitation of lower-income countries and individuals harkens to a colonial behavior that threatens democracy but also severely weakens the sovereignty, legitimacy, and power of the lower income nations. The increase of MNC resources alongside the simultaneous exploitation and decrease of developing nation-states only serves to propel MNC wealth and resource growth.

The wealth and resources of MNCs can have significant influence on the international system and MNCs have only increased their wealth and resources through evading regulations, lobbying and political influence, litigation, and through behaviors which increase world economic inequality.

Non-territoriality

One supremely unique power of non-state actors is their non-location-bound power. Not having territory, not having citizens living within that territory, being able to transcend boundaries, and existing in multiple locations or no locations at all (virtually) provides non-state actors multiple advantages over nation-states.

Nation-states are generally conceptualized as politically sovereign territories which are comprised of regulated populations within a territory that has a certain physical boundary (Engle, 2004; D’Cunha, 2021). Nation-state boundaries are crucial to nation-state power—they delineate national legal jurisdiction, rights and responsibilities. The configuration of borders is also strategic, as the size and location of a nation, as well as who its neighbors are, affect that nation’s security (Haselsberger, 2014; Starr, 2006). The important feature about non-state actors is that they do not necessarily have territory or physical borders (although they can, of course, own land) (Wijninga et al., 2014). The following non-location-bound characteristics can create immense power for non-state actors over nation-states: existing in non-spaces, non-accountability, borrowing nation-state resources and support, and capital mobility.

Existing in Non-Spaces

Under the concept of technopolitics, non-territoriality can be helpful to non-state actor entities as “...they challenge the idea of the traditional space, well delimited both in time (when it is «used») and in space (in its very definition) (Kurban, Peña-López and Haberer, 2017, p. 513). This challenge to non-territoriality includes both place and space. Non-territoriality allows non-state actor actors to disregard Westphalian system of nation-states, challenging nation-state sovereignty through digital and technological processes (Pohle and Voelsen, 2022). The fact that MNCs’ activity takes place in various nations creates a situation that can liberate them from

some of the confines of nation-state laws, loyalty, and more. As Engle (2004) explains, “MNCs undermine the hermetic model of Westphalian sovereignty which saw states as isolated and as the principle object of loyalty of their subjects” (p. 38). It has been noted that MNCs can sometimes have international rights and even military power.

Nation-states struggle to control multinational corporations, especially as many multinational corporations’ power is greater than many of the nation-states trying to control them (D’Cunha, 2021). Multinational corporations and nation-states are fighting for power and legitimacy, and in the many moments that nation-states are not able to legally control multinational corporations, nation-state legitimacy falls. Take for example Mark Zuckerberg’s comment on speaking in front of multiple countries’ parliaments (besides the United States legislature and EU parliament), “It just doesn't really make sense for me to go to hearings in every single nation-state that wants to have me show up and, frankly, doesn't have jurisdiction to demand that” (Mihalcik, 2019, p. 1). Zuckerberg asserts who does and does not have jurisdiction over his actions, regardless of the fact that his company is housed and does business from countries other than the United States and in the European Union. Likewise, multinational corporations’ non-territoriality means that they are mobile and flexible, functioning across borders, under different nation-states’ laws fluidly. They carry out actions in multiple countries with different norms and regulations, and their home nations do not have much of a say on these matters. These international areas in which nations have little legal control over MNCs wears away nation-state sovereignty (Olajide, 2022).

Non-territoriality also means large MNCs are often able to transcend classifications—they are not just one type of company and they are not just located in one area. Their multifaceted nature makes it difficult to regulate, especially due to the ambiguous lexicon within

the digital economy. Many large MNCs can be explained as platform capitalists, in which they control the most critical functions in our technological era, such as social networking, internet searches, smartphone services, video streaming, computer operating systems, and more (Berezko, 2022; Srnicek, 2017). They can exist everywhere (virtually), but almost nowhere (physically). With this multi-faceted, non-locational nature, a lack of being able to define exactly what type of company these giants are makes it difficult to determine how and where the companies fit within the laws. As D’Cunha (2021) explains, “The term “platform” itself is defined by what it is not— not a broad- caster, not a content provider, not an employer— and what is not cannot be regulated” (p120).

Non-Accountability

Large multinational corporations are scattered across multiple countries and serve large populations scattered across the world. This means that not only do they have a lack of strict oversight from one nation, but they can also claim a lack of obligation to one nation’s people, culture, values, or welfare. The goals of these companies do not need to align with the goal of their home countries, and in many cases, they can be conflicting goals (Mishali-Ram, 2009; Yeganeh, 2020). The diverse standards, cultures, and laws across the worlds’ countries make it difficult to discern just how multinational countries should behave when working across borders. What is considered legal or moral in one nation-state can be considered the opposite in another nation-state. Furthermore, who judges how a multinational company should behave or remain loyal to is also ambiguous—stakeholders, local communities, and other non-state agencies can all be assessing an MNC’s actions (Cuervo-Cazurra et al., 2021). Yeganeh (2020) notes that for companies such as Apple or Walmart, multinational corporations are more loyal to their shareholders than any national interests—their judgements then may hold much more weight

than the judgement of local communities or other international entities. Nation-states do not have the luxury of focusing solely on their profits; they have to focus on providing goods, services, and cultural and social obligations to their people. The fact that MNCs can shirk cultural and national obligations and responsibilities means that they can increase their power through purely self-interested means.

Having non-location bound power also means that MNCs can choose which physical locations' rules, economics, or resources suit them best. Multinational corporations can choose particular locations to post their headquarters or hubs because of the lax regulations in that location. For example, their home nation-state's environmental standards may restrict their activities, but another nation-state's environmental standards may be lax (especially poorer countries to attract businesses) (Cuervo-Cazurra et al, 2021). Cuervo-Cazurra et al. (2021) provide another example where, "subsidiary managers might engage in gender discrimination because the practice is perfectly legal and accepted; however, this might be considered gross misbehavior by headquarters" (Cuervo-Cazurra et al., 2021, p. 10). In some countries, a practice such as corruption may be regarded as standard, while a host nation-state may not consider using corruption as an acceptable way to interact. Determining the difference between appropriate acculturation and abuse of cultural or national differences can be challenging (Cuervo-Cazurra et al., 2021).

Meta Platforms' demonstration of non-locational power is exemplified by its lack of accountability to the citizens of the nation-state where it operates. A Meta Platforms whistleblower spoke out in late 2021 concerning Meta Platforms' lack of care for public good, in favor of its own interests. It was noted that a lack of regulation of dangerous groups on Facebook could have contributed to the January 6, 2022 United States Capitol Attack. Meta Platforms' user

engagement, even if it concerns inciting violence, hate, racism, or sexism, is the ultimate priority. Robinson (2021) notes, “Therefore, if a user is engaging with content that deploys things like racism, sexism, or other forms of bigotry, Facebook’s algorithm isn’t set up to dissuade the user from engaging with it. Quite the opposite. If it keeps the user on the site, then Facebook’s algorithm will continue to peddle this kind of content to them” (p. 1). These multinational corporations are willing and able to set aside the wellbeing of their home nation’s populations, and even encourage anti-nationalist events and attitudes in exchange for user engagement.

Likewise, unlike many governments, these companies do not have obligation of making decisions based off democratic governance structures, such as through voting or other forms of legitimization. Because large MNCs exist in multiple places (or mostly virtually), they can evade concerns of legitimacy. Multinational CEOs can make unilateral decisions that can thwart the will of its consumers, users, or the general public. While companies are generally subject to social pressures and cultural expectations (Cuervo-Cazurra et al., 2021), we often see multinational companies acting tyrannically because they do not have any obligations to act otherwise. For example, Meta Platforms’ CEO, Mark Zuckerberg is a prime example. In an article by The Atlantic, it was reported that one of Zuckerberg’s early mantras was “company over nation-state”, all the while promoting users to envision Facebook as a democracy. Zuckerberg published a Facebook Bill of Rights and Responsibilities, requested users to give input, created voting systems for users, and established a (previously mentioned) Oversight Board. The article author argues that, “Of course, as in any business, the only votes that matter to Facebook are those of its shareholders. Yet Facebook feels the need to cloak its profit-seeking behavior in false pretenses about the very democratic values it threatens” (LaFrance, 2022, p. 1). Zuckerberg is accused of imitating democratic processes while acting as an autocratic leader who

owns a majority of shares of Meta Platforms. LaFrance (2021) likens this to a “...Potemkin justice system, one that reveals Facebook for what it really is: a foreign state, populated by people without sovereignty, ruled by a leader with absolute power” (LaFrance, 2022, p. 1). Multinational corporations’ lack of territory allows them to transcend governance, sovereignty, borders, cultures, laws, regulations, values, morals and overall responsibilities.

Borrowing Nation-State Resources and Support

Another characteristic which feeds the power of non-territoriality is that a non-state agent can sometimes rely on support of their nation-states in fashions that benefit the non-state agent. Mishal-Ram (2009) explains, “These actors operate according to relatively uncomplicated bureaucratic procedures, yet largely depend on the political, financial and military support of states as their patrons” (Mishali-Ram, 2009 p. 58-59). Although framed by this author as a potential disadvantage, this dependence on nation-states for support also means they do not need to invest in providing that support themselves. For example, non-state actors do not need to have a military—they have no territory to protect, nor people within that territory. Furthermore, they can rely on their supporting nation-states to provide military in the event that they could need one. Not having territory also means non-state actors can create a bric-a-brac of support from multiple nations, sometimes even using these supports in ways that misuse nation-states’ support against one another (Ataman, 2003).

Capital Mobility

Another advantage of being non-territorial is capital mobility—moving capital from one nation-state to another. The advantages involve lowering taxes, distributing supply chains, exploiting low-cost or underdeveloped countries, and more. Yeganeh (2020) explains,

“Capitalizing on global logistics and production, large corporations can conveniently scatter their supply chains across the world and take advantage of local endowments. The

global presence especially is advantageous to those digital and knowledge-based companies that rely on a lean workforce and intangible assets to generate significant revenues. To overcome the tax codes, the giant MNCs often get involved in complex financial engineering and keep their revenues or assets in low-tax countries. According to the United Nations Conference on Trade and Development (UNCTAD, 2004), the top 100 largest MNCs have an average of 20 holding firms each and more than 500 affiliates that are often domiciled in low-tax jurisdictions” (Yeganeh, 2020 p. 197).

Transcending the concept of territoriality makes a fluidity of exchange easier for these large corporations. Contracts and deals can be outsourced, canceled, and manipulated much easier when a corporation is able to choose which nations they work with and which nations’ rules they want to abide by or evade. These tactics contribute greatly to these large MNCs acquisition of wealth, which further expands their ability to continue absorbing rivals and smaller businesses (Yeganeh, 2020). The obligations and responsibilities of these companies are non-binding, and they are not easily enforceable. These large companies take particular advantage of weak governance and lean regulations in the Global South, intensifying global north-south inequality (D'Cunha 2021).

Not being bound by location and territory serves as a major power for non-state actors, especially MNCs, to compete with nation-state power. MNCs are able to transcend regulations, legal and cultural expectations, and accountability. These large corporations are able to have the protections and resources from nation-states they choose to work under, but they retain the ability to manipulate where and how their operations and capital are regulated. Nation-states do not have these same powers.

Technological Advantages

The technological advantages that many tech MNCs hold serve as a major power for non-state actors to compete with nation-states. International politics has always been strongly influenced by science and technology. As Malik (1990) notes, alongside economics, technology

“...remains the key tool for promoting economic development and national security. In the past, developments in technology gave us the industrial revolution that created the modern international system. Technologically advanced industrialized nations accumulated and exercised their vast economic and military powers in order to establish their supremacy over less advanced parts of the world, in effect creating a hierarchy among nations.” (p. 21).

Today, we see that non-state actors are now leading in technological advancements, especially tech giants. The theoretical approach of technopolitics moves us away from nation-state-centric viewpoints of power being wielded through military or alliances, and moves the discussion toward the ability of non-state actors to be big power holders through their technological advantage. The level and extent of research and technology being carried out by these big companies, such as artificial intelligence (AI), drones, satellites, self-driving cars, are all types of research and technology that the world used to expect governments to carry out. For example, Amazon has a fleet of planes and drones (Gross and Manjoo, 2017), Meta Platforms is building of the world’s fastest supercomputers (Mlot, 2022), and Google’s AI capabilities are unmatched worldwide (Liu, Shi, and Liu, 2017).

Traditionally, nation-states have enjoyed advantages of developing and employing state-of-the-art technology. Malik (1990) explains,

“Technologically advanced nations also enjoy the power to set the norms and standards of behavior in international politics. Great powers, in particular, compete ferociously to maintain their top dog status through their edge in technology. Most high-tech developments are driven by the competitive national quest to maintain the technological superiority over others” (Malik, 1990, p. 24-25).

Today, we see that nation-states are not necessarily the leaders in technology anymore. Many non-state actors, especially MNCs with digital platforms, have research and development that dwarfs that of nation-states—meaning these companies are now setting the standards and making the rules. Arts (2003) notes that nation-states’ ability and knowledge to govern new technology

is dubious. Moreover, nation-states are already spread thin carrying out their traditional governing functions; filling the gaps of governing over new technology is perhaps better suited to private actors.

Platforms

Multinational tech companies, especially those who own and control platforms, sometimes known as platform capitalists (Srnicek, 2017), have a large amount of power concerning the overall mechanisms of the online world. The emergence of the platform economy has concentrated large amounts of economic and social power under a few large MNCs. These large MNCs set their own rules concerning how the internet operates, including its infrastructure and application (Pohle and Voelson, 2022). Thus, creating technology is not the only technological advantage of non-state actors such as Meta Platforms —owning the technology also creates great power. Top technology companies have invested in creating physical infrastructures, such as underwater cables for the internet, to a point that they wield more power over the internet than most countries. Pohle and Voelson (2022) explain what this could mean,

“...these tech giants seek to create subsystems within the Internet that are self-contained, and thus protected from competition. Seen through the lens of network theory, these companies are attempting to turn their “platforms” (operating systems, social networks, trading centres, app stores) into distinct subnetworks, within which they can occupy central positions of power (Pohle and Voelson, 2022, p. 21).

Importantly, technopolitical analysts have pointed out how technology use reconfigures political power dynamics. Political actors choose to use a piece or appendage of technology in a way they expect to be useful. Their experience with this effort provides opportunities as well as constraints, and as a result, the political actors can choose to keep or change their use of technology to achieve their goals. Kurban, Peña-López and Haberer (2017) explain that this technopolitical process “...reconfigures political relations and power dynamics through

conflicting appropriations as well as negotiations. Technopolitics also reconfigures power relations and opens up possibilities for new practices and approaches (short term), and organizations and institutions in the long term” (p. 514). The authors expand by noting how this reconfiguration also changes how people interact with one another as well as how people interact with institutions—often empowering and amplifying individual voices. One example is provided of this reconfiguration of power relations—the Edward Snowden classified information leaks, which single-handedly undermined nation-state authority and power. The authors explain that mediation structures (such as digital platforms), which have enhanced power through technology, allow for a type of governance that is more open and distributed. Kurban, Peña-López and Haberer (2017) explain that this is a process of the deconstruction of sovereignty overall.

Platforms serve as an important mechanism to drive and grow technological advancements for non-state actors, especially for large MNCs who own these platforms. The power of owning these platforms and their underlying infrastructure creates the ability to control a huge portion of the digital world.

Information Transmission

Virality

Another characteristic of large MNCs that can increase their technological advantage is the concept of virality. Through the ability to make something “go viral”, a concept, piece of legislation, political goal, propaganda and misinformation, narrative, and more can spread across the entire globe online nearly instantaneously.

Viral content generally comes from traditional media, but is then re-circulated on social media platforms, such as Twitter and Facebook by being forwarded from a friend or well-known person on these platforms to become viral. As Wadbring and Odmark (2016) explain, “This means that rather than actively seeking news from a news organisation, news simply appears in the audience’s digital flow, through one’s own accumulated network” (p. 133) In a very technopolitical fashion, where technology can take on its own outcomes, social media allows news to “achieve a life of its own online”. Wadbring and Odmark go on to explain that “The media organisations partly lose control over the diffusion process, and simultaneously individuals gain power over the process, and become opinion leaders for others” (p. 132). The fact that multinational tech companies control these online platforms which allow online virality means that they hold immense power concerning the spread of information¹.

Algorithmic Influence

Legal control is not necessarily the most important control that multinational corporations hold. Multinational corporations wield considerable autonomy and influence as a result of their wealth, resources, size, non-territoriality, and platforms. Wijninga et al. (2014) note that, “It is emblematic of today’s world that power and influence are no longer only determined by legal status and hard power attributes, but also by the extent of an organization’s network, by their perceived or recognized legitimacy and by their power to mobilize resources” (p. 144). In the

¹ The power of virality is not fully in the hands of the platforms, however, as the last decade has seen “social bots” automatically amplifying targeted information on a large scale. Similar bots are also employed to artificially boost political leaders’ popularity or create viral content that outperforms their opponents’ content. These bots can influence these platforms’ algorithms by altering viral dynamics. As Guild (2018) explains, social media platforms may not act to intervene in the social bots’ actions, “The core of platforms’ algorithmic intelligence (and of their business model) lies in the capacity to maximise the virality of online contents, in ways over which their very creators have little control. They may be able to stop blatantly false and mischievous contents, but they will not oppose the very virality that generates their profits” (p. 133). It has been seen as a responsibility of these social media platforms to moderate and remove the artificial amplification by these bots, but as we can see, there are motives for these platforms not to mediate.

case of digital platforms, the ability to amplify a message is enormous and instant. Meta Platforms' user numbers are larger than any nation-state in the world, meaning that they have a larger audience than any one nation, and even multiple nations combined. Moreover, this message is only intensified by the influence that network can have on its users. With the huge amount of data digital platforms have on their users, they know their people best—perhaps even better than their own nations know them. Their control of algorithms ensures that individual users are getting messages that interest them and keep them coming back to the platform—a tactic nation-states do not have the ability to carry out (D'Cunha, 2021). Additionally, nation-states do not have their own digital platforms—they have to use digital platforms to amplify their message, meaning they rely on these multinational corporations' tools to gain reach and influence. This second-tier amplification of messages for nation-states means that the true power of amplification and influence is in the hands of multinational corporations. D'Cunha (2021) provides an example of the recent 2020 United States Presidential election, noting that “A privately-owned social media platform is able to amplify outrage so widely that it results in the formation of militias or the election of an autocrat” (p. 109). Not only can these multinational corporations' influence be broader and deeper than that of the nation-state, but also it has been shown that certain populations, such as the American public, favor businesses over the government. American trust in the United States government continues to decrease since the 1950s, where, “... a vast majority of Americans consider that corporations are better positioned to provide effective solutions to problems that governments have been assigned to resolve including obesity, affordable drug prices, outsourcing of jobs to foreign countries, employment and environmental pollution (Barometer, 2012)” (Yeganeh, 2020, p. 204). Multinational corporations have a high amount of influence worldwide, strengthening their ability to shape the

world culture. This contests nation-state power and sovereignty as the corporations develop more advanced tactics than nationalism or symbolism used by nation-states to secure power and sovereignty.

Communication

The ability to influence and manipulate worldwide communication also enhances MNCs' technological advantage power. Multinational tech companies' control over these social media platforms, these extremely popular and efficient communications infrastructures, gives them a great ability to influence public opinion (D'Cunha, 2021). These companies can adjust algorithms or otherwise affect the promotion of values or mobilization of public opinion (Wijninga et al., 2014,) and the world has seen how this works in action on various occasions of public mobilization (i.e. misinformation about Covid-19). When put up against nation-state governments, non-state actors can severely interfere with nation-state intentions concerning public opinion. Take for example the case in China presented by Guild (2018):

“The Chinese internet media’s largest problem is . . . the amplification of negative and alternative information on Chinese domestic issues caused by opinion formation mechanisms that have been a part of the Internet since it was invented in the US; Chinese society, in the midst of a transformation, does not have the hedging mechanisms to deal with this amplification, so traditional public opinion guidance systems do not seem to be pulling their weight when it comes to overcoming these problems. (Appendix B of King, Pan & Roberts, 2017)” (p. 136).

Against China’s efforts to guide their own public’s opinion, social media’s virality creates mechanisms that outpace the nation-state’s abilities. This is an important example of how a non-state’s technological advancement can outpace or out-win a nation-state—even one as powerful as China.

MNC control over communications infrastructures does not just allow them to influence public opinion—it allows them to influence entire cultures. Cultural diffusion, a culture’s

practices and beliefs spreading to another culture, can be spread through migration, traveling and visiting other cultural groups, and intercommunication, where groups are in regular contact with one another (Bartlett, 1923; Cabell and Valsiner, 2014). Through history, the ability for quicker and more profound intercommunication between groups increased as technological advancements such as radio, film, television, and transportation developed.

The internet and social media have only increased this proliferation of cultural diffusion. Social media holds key features that can promote cultural diffusion, where successful adoption of culture may require "... institutional support, repeated exposure, and/or active instruction in the new practice are required for it to "take hold" in new settings (Kaufman and Paterson, 2005 p. 82). Through virality, reposting, and opinion leaders, social media holds many keys to successful cultural diffusion. This transfer of culture includes not just national cultures, but also sub-cultures, online cultures, and extremist influence. As noted by Cabell and Valsiner (2014), "The diffusion of a single idea like 'revolution' can have dramatic effects, not just on the transformation of individual nations, but the world as a whole" (p. 146). Subsequently, multinational corporations who own or control social media platforms have a large impact on cultural diffusion through their ability to adjust the flow of information, manipulate algorithms, support or block certain political agendas, and through their monopolization of markets and the virtual world itself.

Not only is cultural diffusion itself powerful, as the spread of new ideas and ways of life can greatly impact the world, but cultural diffusion also enhances human capital and thus an economy's ability to expand production and advance technologically (Ashraf and Galor, 2007). A multinational corporation's power to regulate cultural diffusion allows them to influence who and when cultural information is spread to, or if that information is allowed to spread to a culture

at all. This power also influences an entities' economy—a recurring theme in the power of multinational corporations.

Collection of Information

A potentially huge power of non-state actors, such as multinational technology conglomerates, is their ability to acquire big data. With 2.1 billion users, we can see that Meta Platform's ability to collect user data easily surpasses the data a nation-state may aim to collect about its people. Not only can digital platforms collect data on more individuals, but also the detail of information gained through digital platforms, especially social media platforms, is quite different from the data that a nation-state might collect. This fine-grained data on billions of people is extremely valuable to both companies for innovation and decision-making, but also to feeding machine-learning algorithms and other AI systems (United Nations Conference on Trade and Development, 2019). Having vast amounts of data on billions of individuals only enhances the technological advancements of non-state actors.

Non-state actors' abilities to own and control platforms and to control and manipulate the transmission of information worldwide are massive ways to increase non-state actors' technological advancement power. Through unique capabilities like virality, cultural diffusion, and the collection and utilization of big data, non-state actors possess distinctive capabilities that are not generally available to nation-states.

This section has shown results for research question two on types of power which help non-state actors such as Meta Platforms, compete with nation-states. These powers are broad and over-arching. This leads to the following research question, which seeks to scrutinize specific examples of power wielded by a non-state actor, with Meta Platforms serving as a case study.

R3 Results:

R3: What power exists within Meta Platforms that is stronger than what nation-states have?

The subsequent aspect of understanding how non-state actors rate, when compared with nation-states, in calculations of national world power builds on R1 and R2, while also drawing on relevant literature. R3 asks, “What power exists within Meta Platforms that is stronger than what nation-states have?” By examining results from R1, which applies the Asia Power Index to data on Meta Platforms, calculated version of a subset of Meta Platforms’ strengths over nation-states was identified. R2 and referral to literature also provided a big-picture idea of Meta Platforms’ non-state strengths over nation-states.

This question was first answered from the constraints of the Asia Power Index, meaning that powers at the indicator level that Meta Platforms holds within what the Asia Power Index measures were first be considered. Then powers that Meta Platforms holds which are not being measured by the Asia Power Index were considered.

R1 Results to Inform R3

Meta Platforms’ Powers That Are Stronger Than Nation-State Power (According to the Asia Power Index)

From research question 1, there are multiple indicators for which Facebook surpassed all or most countries on the index. This is an indication that these powers, specific to Meta Platforms, are stronger than what nation-states have in general. As a rule of thumb, only those indicators for which Meta Platforms scored higher than all other nations with a margin of at least 10 points were examined. Also, any indicators in which Meta Platforms scored higher than all

other nations except one outlier nation, which also scored higher than other countries with a margin of 10 points or 10 percent were examined.

Meta Platforms scored significantly higher than other countries on the Asia Power Index in four indicators: Productivity, R&D Spending, Working Age Population Forecast 2050, and Online Search Interest.

Table 6.2 Meta Platforms' Powers - Productivity

Productivity
Meta Platforms scored 100 points in the productivity indicator, defined as “GDP output per worker” and calculated by revenue divided by number of employees. The result was \$ 1,638,585 per Meta Platforms worker. This result is far higher (1339.94 percent higher) than the highest nation-state’s output per worker, with Australia ranking 1 st at \$113,795 per worker, showing this as the most significant power that Meta Platforms holds over other countries on the Asia Power Index.

Table 6.3 Meta Platforms' Powers - R&D Spending

R&D Spending as Percent of GDP
Meta Platforms’ Research and Development Spending was at 20.9 percent of their annual revenue where the highest score on the Asia Power Index was South Korea at only 4.5 percent. This scored Meta Platforms 100 on the index and is a remarkably strong power that Meta Platforms holds above nation-state power.

Table 6.4 Meta Platforms' Powers - Working Age Population Forecast 2050

Working Age Population Forecast 2050
Meta Platforms’ working age population forecast for 2050, defined as the “Medium variant forecast for total working-age population, 15–64” scored at 100. India also scored 100 points for this indicator as a high outlier nation-state. The next highest score for this indicator was a China with a 75.9. Meta Platforms’ employees, which are being considered their population for this study, are all necessarily at working age, making their working age population a strong power for Meta Platforms over nation-states.

Table 6.5 Meta Platforms' Powers - Online Search Interest

Online Search Interest
Meta Platforms scored 76.93 percent for online search interest, defined as “Online interest for a given Index nation-state in 24 other Index countries; average percent of total Google and

Baidu searches for selected countries (2020)". The highest score for a nation-state on the Asia Power Index was 19.2 percent for Japan. This is a significant power that Meta Platforms holds over nation-states.

R2 Results to Inform R3

Meta Platforms' Powers Not Accounted For In the Asia Power Index Which Are Stronger Than Nation-State Power

Research question two asks about powers which help non-state actors such as Meta Platforms compete with nation-states. From those results, the powers that Meta Platforms holds which are stronger than nation-states, which were wealth and resources, non-territoriality, and technological advantage, were specifically examined, providing more particular examples within the R2 categories of power.

The wealth and resources, along with multinational, non-territoriality and technological advances and loopholes that excuse Meta Platforms from strict guidelines on how to run their businesses are precisely what enable Meta Platforms to hold and exercise power much like a nation-state might. Nations are politically organized territories that recognize no other law, and we do see in many ways that Meta Platforms is acting like a nation-state, creating and following its own laws.

The fact that Meta Platforms is a mostly technology-based company also elevates its power potential in comparison to nation-states. Technology as a whole is breaking down the concept of nation-states and what make them powerful. As the world experiences 'time-space compression' through technology and globalization, there is a decreased relevance of time and distance as well as place and space (Widdis, 2021). Communities from across the world can meet up online in an instant and the Covid-19 pandemic forced the world to become more comfortable with a virtual

existence. Vaughan (2011) asserts that sovereignty is no longer tied to territory—a huge advantage for non-state actors who do not have territory. Vaughan (2011) goes on to explain how globalization overall has changed international affairs, as “ It marks ... the beginning of an era in which national governments have to share their power with other entities, most notably transnational corporations, intergovernmental organisations and non-governmental organisations (p. 17)”. Power today is focused much less on expanding territory, and much more on gaining power through economics and trade (Vaughan, 2011). Power is heavily based on technology and social constructs—culture, security, economics.

Specific to R2, categories of power included wealth and resources, non-location-bound power, and technological advantages. Under these specific categories, Meta Platforms holds specific powers that are stronger than nation-state power.

Table 6.6 Meta Platforms' Powers - Wealth and Resources

Wealth and Resources
Meta Platforms' wealth and resource powers are increased through their ability to: • Evade nation-state and international regulations • Manipulate and influence politics • Lobby for regulations to their benefit • Litigate in order to settling, overturn, or delay enforcement of regulation
Meta Platforms' Oversight Board is a strong strategy for evading regulations. This allows Meta Platforms to self-regulate. This board does not answer to any higher authority and is not made in a democratic fashion. Nation-states do not generally have this power.
Meta Platforms has used its wealth and resources to buy out their competition.
Meta Platforms' political influence encompasses the possibility of adjusting algorithms on powerful social media sites in favor or against politicians or policies.
Meta Platforms evades regulations through political power and lobbying. ▪ While nation-states can also carry out political maneuvers through politics, Meta Platforms' ability to expend resources on lobbying is greater than what nation-states can afford to spend on similar efforts.
Meta Platforms possesses greater resources to litigate and combat regulations than the majority of countries.
Meta Platforms' aggravation of economic disparity creates a larger rift between their power and lower income entities

Table 6.7 Meta Platforms' Powers - Non-Location-Bound

Non-Location-Bound
Meta Platforms' non-location-bound power is increased by its ability to: • Transcend classifications • Evade regulations • Not be accountable • Borrow nation-state resources & support • Take advantage of capital mobility
Meta Platforms' multi-locational status has allowed it to assert who does and does not have jurisdiction over their actions. No one nation-state has full control over Meta Platforms' actions.
Meta Platforms' multinational feature allows it to transcend governance, sovereignty, borders, cultures, laws, regulations, values, morals and responsibilities
Meta Platforms does not have to be accountable for its users' well-being
Meta Platforms can pick and choose which culture, customs, and norms it chooses to follow • i.e. Meta Platforms is not as constrained by domestic politics and national interests as a nation-state might be
Meta Platforms can “borrow” nation-state resources. In the event of a war or terrorist threat, Meta Platforms can always depend on nation-state resources, such as military or cybersecurity to counteract threats
Meta Platforms benefits from nation-state resources in general—(i.e. infrastructure)
Meta Platforms' capital mobility means it can maneuver to evade certain taxes, exploit low-income nations, and move capital across borders to its advantage.

Table 6.8 Meta Platforms' Powers - Technological Advantage

Technological Advantage
Meta Platforms' Technological Advantage power is increased by its ability to: • Own and control online platforms • Own and control information transmission
Meta Platforms has used their position as a platform capitalist to control critical functions in social networking and internet searches. ▪ Meta Platforms has the ability to spread information in a “viral” fashion, outpacing nation-state capabilities ▪ Meta Platforms can prevent nation-state information from spreading through its platform capitalism
Meta Platforms can control virality & influence public opinion, especially through algorithmic manipulation
Meta Platforms' control of algorithms means fine-grained user data keeps users influenced
States do not generally have their own digital platforms –they have to rely on Meta Platforms to gain reach and influence
Meta Platforms has the ability to influence and manipulate cultural diffusion through the digital world, especially among its users, which total to more than any nation-state's population in the world.

Meta Platforms evades regulations through its technological advantages by developing and employing state-of-the-art technology and making its own regulations on that technology
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Meta Platforms holds big data on its 2.1 billion users, which is more personal and fine-grained than nation-states hold

- | |
|--|
| <ul style="list-style-type: none">▪ These data can be beneficial to sell to companies for innovation and decision-making▪ These data can also be beneficial to provide machine-learning algorithms and other AI systems |
|--|

It is important to recognize that these powers are only a glimpse of the power of Meta Platforms today. This study examines the power that is measurable and accessible publicly—private information on Meta Platforms’ assets, political involvement, data, cultural and social influence, and more could reveal at greater detail the true power Meta Platforms holds in comparison to nation-states.

The next chapter focuses on results from RQ 4, concerning what an accurate power index calculation for non-state actors and nation-states alike would look like. RQ 1-3 present evidence of the extent of Meta Platforms’ influence, highlighting areas of power that are absent from the Asia Power Index. By using this information, the next chapter details results of RQ 4 which lay out a new power index that can be applied to non-state actors and nation-states alike.

CHAPTER 7 Results for RQ 4

Introduction

This section is dedicated to presenting the outcomes related to the fourth research question of this dissertation. It stands alone from previous research questions because the findings of RQ4 have led to the development of a power index that provides a solution to an over-arching issue in this dissertation's topic— the absence of appropriate metrics to gauge non-state actor power in comparison to nation-state power. As discussed in Chapter 5, power indexes tend to be heavily focused on nation-states. This problem has resulted in the exclusion of non-state actor power measurements among those examining world power. This section, however, offers a solution by presenting a tool that is designed to measure non-state actor power against nation-state power.

Research Question 4 constitutes the final component of this dissertation's main inquiry of how non-state actors rate, when compared with nation-states, in calculations of national world power, especially considering changing sources of power enabled by technology. By presenting the New Nation-State and Non-state actor Power Index, it is possible for a more comprehensive evaluation of global power by facilitating a comparison between non-state actors and nation-states. Moreover, the power index presented in this section was devised with a technopolitical perspective to incorporate the novel forms of global power emerging as a result of technological advancements, and also avoids being nation-state-centric.

R4 Results:

In response to the question of how non-state actors rate, when compared with nation-states, in calculations of national world power, RQ4 aims to develop a tool to assess both nation-state and non-state actor power.

RQ4: What would an accurate power index calculation for non-state actors and nation-states alike look like?

R4 was answered using the results from R1-3 and referring to literature. R1-3 provide evidence of Meta Platforms' power that was measurable, as well power categories or indicators in the Asia Power Index did not contain. Additionally, a technopolitical lens was used to refocus this index to contemporary types of power, rather than reverting to a focus on traditional realist and liberalist ideas of power.

As mentioned under R1 in Chapter 6, there were multiple indicators which were applicable and collectable data for Meta Platforms, multiple which were applicable but not appropriate for Meta Platforms or a non-state, multiple indicators which earned a zero, and multiple indicators which were not applicable or collectable for Meta Platforms, resulting in a null zero. For details, refer to Chapter 6 under R1 Results and the Appendix Tables A.3, A.5, A.6, A.7, and A.8.

The measurable, non-measurable, and non-state actor inclusive indicators gave rise to five groupings to inform the reconstruction of an index that is inclusive for non-state actors as well as nation-states: indicators which were inclusive of non-state actors; indicators that need alteration to be inclusive of non-state actors; indicators that need removal for lack of non-state actor inclusion; missing indicators, sub-measures, and measures; and an adjustment of weights. Each of these categories is described below.

Indicators inclusive of non-state actors: These indicators were kept in the new index.

These are indicators, sub-measures, and measures which are on the Asia Power Index that prove to be useful to gauge power for nation-states and non-state actors alike. Some indicators

were not applicable to Meta Platforms, but could potentially be useful to other non-state actors and/or show how non-state actors are lacking nation-state-specific power and so were kept in the index.

Indicators that need alteration to include non-state actors: These indicators were altered in the new index.

These include indicators, sub-measures, and measures which are on the Asia Power Index but need adjustment either because they were not applicable to Meta Platforms /other non-state actors or were too nation-state-centric (i.e. non-measurable or impractical).

Indicators that need removal for lack of non-state actor inclusion: These indicators were removed in the new index.

These include indicators, sub-measures, and measures which require removal either because they were not applicable to Meta Platforms /other non-state actors or were too nation-state-centric (i.e. non-measurable or impractical).

Missing indicators, sub-measures, and measures: These were added to the new index.

These include indicators, sub-measures, and measures not on the Asia Power Index, which should be included in an index for accurate power measurement of Meta Platforms /non-state actors and nation-states alike. This list is not exhaustive, as it only includes the topics discussed in this dissertation and influenced by a technopolitical lens. Additionally, these measures aim to be relatively quick to measure, as well as publicly accessible.

A full list of which indicators were kept, altered, removed, and added are detailed in the Appendix section labeled Categories Adapted for the New Non-State Agent and Nation-State Power Index, as well as the tables A.9, A.10, A.11, A.12, and A.13 in that section.

Measures:

Because many indicators were removed, added, and altered, and to create a technopolitical emphasis in this index, measures were reorganized, adjusted, and added for this new index. This new index deemphasizes Military, emphasizes Economic Capabilities and Relationships, provides a new opportunity for evaluation of technology with a Technology sub-measure, and provides more opportunities for evaluating cultural and social influence, as well as monopolistic and colonial-like behaviors and power. The changes made are detailed in the Appendix, under the Categories Adapted for the New Non-State Agent and Nation-State Power Index section (tables A.9, A.10, A.11, A.12, and A.13).

Adjusting Weights

Weights for the new Nation-State and Non-state actor Index were redistributed and adjusted to fit the new configuration of categories, sub-categories and indicators (See the Appendix Tables A.14 and A.15). The Lowy Institute Asia Power Index weightings are based on “...relevant academic literature and consultations with policymakers from the region”, and “...consistent with broadly held views in the policy and scholarly communities”, (Lemahieu and Bley, 2019, p. 174) and so an effort to maintain similar weightings in the new Nation-State and Non-state actor Index were applied, barring a reduced emphasis on nation-state-centrism and with an increased emphasis on technology-related indicators.

As the Lowy Institute maintains, weightings are value judgements about the importance of each measure, and other scholars may choose to adjust the weightings as their judgement may differ. However, the Lowy Asia Power Index's large number of indicators was shown to be "...quantitatively more important than [their] weighting scheme" (Lemahieu and Bley, 2019, p. 174).

New Non-State Actor and Nation-State Comparison Index:

The newly created index includes 6 measures, 23 sub-measures, and 89 total indicators.

Table 7.1 New Non-State Actor & Nation-State Power Index

New Non-State Actor & Nation-State Power Index (Definitions in Appendix Table A.16)		
Measure Level	Measure	Weight
Measure	Economic Capabilities	20%
Sub-Measure	Size	40%
Indicator	GDP or Revenue	
Sub-Measure	International Leverage	40%
Indicator	Corporate Giants	
Indicator	Assets, Reserves, and Wealth Funds	
Indicator	Debt Relative to GDP or Revenue	
Indicator	Capital mobility	
Sub-Measure	Connectivity	20%
Indicator	Global Exports Or International revenue as % of total revenue	
Indicator	Global Investment Outflows (%) OR Int'l Investments Globally	
Indicator	Global Investment Inflows (%) OR Int'l Investment in companies owned	
Measure	Technology	20%
Sub-Measure	Activities	20%
Indicator	High-tech Exports	
Indicator	Productivity	
Indicator	Human resources in R&D	
Indicator	R&D spending (% of GDP)	
Indicator	Scientific Prizes, Awards (Nobel, Turing...)	
Indicator	Renewable Energy	
Sub-Measure	Assets	40%
Indicator	Supercomputers - quantity & Quality	
Indicator	Satellites Launched	
Indicator	AI Capabilities	
Indicator	Technological advantage	
Indicator	Technological assets	
Sub-Measure	Monopolization	40%
Indicator	Degree of Market Monopolization	
Indicator	Internet Infrastructure	
Indicator	Digital Platform Infrastructure ranking	

Measure	Security & Military	10%
Sub-Measure	Defense Spending	35%
Indicator	Military Expenditure or Physical Security Expenditure	
Indicator	Cybersecurity Expenditure	
Sub-Measure	Armed Forces	35%
Indicator	Military and paramilitary forces	
Indicator	Training, readiness and sustainment	
Indicator	Organization: Combat Experience	
Indicator	Command and Control	
Sub-Measure	Weapons and Platforms	30%
Indicator	Military Assets	
Indicator	Intelligence capabilities	
Indicator	Global arms trade	
Indicator	Cyber Capabilities	
Measure	Resilience & Future Resources	20%
Sub-Measure	Internal Stability	20%
Indicator	Government or organization effectiveness	
Indicator	Political or Organizational Stability	
Indicator	Climate change resilience	
Indicator	Internal conflict years	
Indicator	Standard of living for population/employee/followers	
Indicator	Health of population/employees/followers	
Indicator	Reputational Versatility	
Indicator	Longevity / History	
Sub-Measure	Resource Security	10%
Indicator	Energy trade balance	
Indicator	Energy self-sufficiency	
Indicator	Fuel trade balance	
Indicator	Fuel security	
Indicator	Rare-earth metals supply	
Indicator	Lack of necessity to maintain physical infrastructure, public facilities	
Sub-Measure	Geoeconomic Security	15%
Indicator	Diversity of export products	
Indicator	Diversity of export markets	
Indicator	Dependency on global trade	
Sub-Measure	Geopolitical Security	25%
Indicator	Landmass deterrent	
Indicator	Demographic deterrent	
Indicator	Interstate conflict legacies	
Indicator	Boundary disputes	
Indicator	Non-location bound (as an advantage)	
Indicator	No cultural, national loyalties or obligations	
Sub-Measure	Nuclear Deterrent	15%
Indicator	Nuclear weapons capability	
Indicator	Nuclear immunity: decentralized or non-location bound	
Sub-Measure	Future Resources	15%
Indicator	GDP forecast 2030	
Indicator	Economic capability 2030	
Indicator	Working-age population forecast 2050	
Indicator	Labor dividend 2020-50	
Measure	Diplomatic Influence & Allies	15%

Sub-Measure	Alliances	25%
Indicator	• Trade with region	
Indicator	• Primary trade partner	
Indicator	• Economic Agreements/Instruments	
Indicator	• Support from other nation-state's defense	
Sub-Measure	Diplomatic Network	15%
Indicator	• Embassies & Offices	
Indicator	• Memberships	
Sub-Measure	Multilateral Power	25%
Indicator	• Litigational or Regulation goals/alliances	
Indicator	• Multilateral Forums	
Sub-Measure	Foreign Policy	35%
Indicator	• Efficacy of leadership	
Indicator	• Strategic Ambition	
Indicator	• Litigation power	
Indicator	• Evading Regulations	
Indicator	• Incongruent relationships	
Indicator	• Residual or contemporary colonialism	
Indicator	• Deterioration of democracy	
Measure	Cultural & Social Influence	15%
Sub-Measure	Cultural Diffusion	30%
Indicator	• Online search interest	
Indicator	• Global brands	
Indicator	• Cultural and Social Influence worldwide	
Indicator	• Cultural Cohesiveness	
Sub-Measure	Online Monopolization	35%
Indicator	• Digital Virality	
Indicator	• Online Information Monopoly	
Sub-Measure	Information Flows	
Indicator	• Online Interest for News	30%
Indicator	• Online interest for Newspaper or Magazine	
Indicator	• Online interest for TV	
Indicator	• Online interest for streaming video	
Indicator	• Online interest for radio	
Indicator	• Digital network	
Sub-Measure	People Exchange	5%
Indicator	• Immigrant populations	

This index is important and novel in that it aims to examine features of power for non-state actors as well as nation-states. This index is also modernized, especially with a technopolitical lens, in order to capture key features of non-state actor and nation-state power which stem from modern technology, an aspect frequently left out of world power indexes. This power index's measures, sub-measures, indicators, and weight have been developed in response

to the first three research questions of this dissertation, which ask which types of power non-state actors hold, and which examine defects of current power indexes. As stated previously, the Asia Power Index has been used as a template from which to develop this new index, as the Asia Power Index's foundational research, methodology, and intent was found to be suitable for the intent of examining non-state actor power as well as nation-state power.

This index is intended to serve as a guide for future indexes measuring world power, with the strong intention that non-state actors are included in measurements of world power.

Summary:

This chapter has detailed results for RQ4, which asks what an accurate power index calculation for non-state actors and nation-states alike would look like. R4 results provide a New Non-state actor and Nation-State Power Index, a novel and important power index that is applicable to and appropriate for non-state actors and nation-states alike. As mentioned in Chapter 4 Measuring World Power, most inquiries into world power are measured with nation-state-centric power indexes. This new power index enables scholars and practitioners of world power to better measure and comprehend power dynamics across a diverse range of entities, beyond nation-states, offering a much-needed solution to an overlooked problem in the topic of world power.

CHAPTER 8 Discussion and Conclusion

Discussion

Introduction

Today, global power is changing. Potentially, the international system is changing. And this change is highly connected to technology. Power is coming from places that are not traditional institutions of power and which are not necessarily formal parts of the government. The political, economic, and social landscape of the world is being influenced by mechanisms that are networked, intertwined, and deeply technological. Our perspectives toward measuring power need to evolve with the evolution of actual world power.

This dissertation has attempted to present one version of that new perspective toward measuring power. As such, it has examined the overarching question of how non-state actors rate, when compared with nation-states, in calculations of national world power, especially considering changing sources of power enabled by technology. In answering this, four research questions were explored: R1 asked how Meta Platforms rates in calculations of national world power if compared to nation-states today; R2 asked what types of power help non-state actors, such as Meta Platforms, compete with nation-states; R3 asked what power exists within Meta Platforms that is stronger than what the nation-states have; and R4 asked what an accurate power index calculation for non-state actors and nation-states alike would look like. The previous chapters 6 and 7 laid out results, while this chapter attempts to address the main ideas from those results. Below are multiple key findings that show the significance and impact of this work. However, providing answers to the research questions in this dissertation was complex, thus the study has certain limitations. The following section briefly explains the limitation. That is followed by a discussion of key findings.

Limitations

This study is limited in a few ways. Firstly, all power indexes, including the power index proposed in RQ4 of this dissertation, are not all encompassing or exhaustive. Secondly, non-state actor power is diverse and challenging to measure. Thirdly, this study is limited to the present, not to potential shifts in the future. Fourthly, this study did not focus on the potential benefits of non-state actor world governance. Lastly, this study's index was based off an index which examined only 26 of the world's countries.

The challenge of quantifying power is common to all power indexes, and there is a continuous debate about which factors to measure and how to assign them relative importance. Additionally, obtaining reliable and comparable data across various non-state actor actors and nation-states is a challenging task, especially with regard to non-material factors like ideology or culture.

Given the diversity of non-state actors, it is difficult to create a generalized power measurement index for non-state actor power. This study mainly focused on the power of multinational corporations as non-state actor power, which may restrict the applicability of the results to other non-state actor actors.

In addition, this study is limited to the present. It offers a snapshot of nation-state power in the contemporary world, and potential shifts in the future such as world wars, pandemics, or outstanding technological advancements could have the potential to greatly impact global power dynamics.

Furthermore, this study concentrates primarily on the difficulties arising from the growing global power of non-state actors, while it is worth noting that non-state actor world governance has the potential to offer advantages rather than solely presenting challenges.

Lastly, the Asia Power Index examines mostly Asian countries, limiting the scope to measurements of only 26 of the world's countries. Examining Meta Platforms' power in comparison to more countries of the world could provide better context around Meta Platforms' power.

Key Findings

The research findings of this dissertation are synthesized and contextualized in this section order to provide an overview of the study's outcomes. In order to contemplate the significance and impact of this dissertation's findings, a summary of key findings is provided, as well as an interpretation of how results support or challenge existing perspectives. Implications of the findings for the field of international relations, as well as practical applications, future research, limitations and a conclusion are also included.

The most important outcomes from this study include 1) the finding that Meta Platforms rates as a Middle Power on the Asia Power Index, despite the index's nation-state-centric power focus; 2) the demonstration of how non-state actors hold and use different types of power and different driving mechanisms of power than do nation-states; 3) the identification of shortcomings of current power indexes, particularly given changes in our globalized, technology-focused world, which fail to recognize and measure non-state actor power against nation-state power; and 4) the creation of a power index which is appropriate for non-state actor power measurement as well as nation-state-power measurement.

1. Meta Platforms rates as a Middle Power on the Asia Power Index, despite the index's nation-state-centric characteristic.

The main objective of this research was to examine how non-state actors compare to nation-states in terms of world power, especially considering changing sources of power enabled by technology. One key finding is Meta Platforms' Middle Power status and ranking of 17th out of 26 nation-state scores resulting from the application of the Lowy Institute's Asia Power Index. This finding reveals: A) Meta Platforms falls within middle range of the 26 index countries on the Asia Power Index, and B) Meta Platforms received a competitive Asia Power Index score despite the measurement tool being nation-state-centric.

A) Meta Platforms falls within the middle range of the 26 index countries on the Asia Power Index:

Applying the Asia Power Index's indicators to Meta Platforms showed that Meta Platforms has substantial power in the international arena. Meta Platforms excelled in the areas of cultural influence and future resources, and was competitive in the area of economic resources. The main feature that augmented Meta Platforms' power score in the cultural influence sub-measure was the large portion of worldwide internet traffic that is controlled through websites owned by Meta Platforms. Having a strong cultural influence power allows Meta Platforms to shape how people think, behave, and interact with one another, helping define identities, worldviews, and many other aspects of life. This means that Meta Platforms has significant power concerning the world's norms, communication, politics, business, and more.

While Meta Platforms did score exceptionally high, it is important to remember how young Meta Platforms is relative to most nation-states, and how volatile the multinational technological

corporate world is. If we compare the lifespan and volatility of an MNC to the lifespan and volatility of a nation-state, there are vast differences. Some nation-states' lifespans reach back many thousands of years long—their history, culture, languages, and land are truly ancient. Most multinational corporations can hardly claim being around for more than a few decades. In other words, an MNC is generally more ephemeral than a nation-state, so future projections about these two different types of entities should be carried out carefully, and potentially differently. Making decade-long projections about Meta Platforms to estimate world power may not be an ideal approach. Concerning volatility, MNCs are generally more volatile than nation-states. When a business is no longer profitable, they may decide to close. When a nation-state is not profitable, or successful (or whatever other measure you want to place on them), they do not generally have the option to close. When an MNC dissolves, its projects, employees, offices and warehouses, services and economics, etc. might need to be distributed, rearranged, transferred, or terminated. However, when a nation-state dissolves, the individuals living under that nation-state, the territory of that nation-state, the economics of that nation-state, and much more remain to exist and require attention in a way that cannot just be terminated. Of course, as failed nation-states have showed, people, territory, governments, and economics can be transferred, distributed and rearranged, but the logistics are much more devastating and difficult than with the closure of an MNC. If Meta Platforms fails and dissolves in the next few years, the fallout would not be as heavy as a nation-state failure happening in the next few years.

B) Meta Platforms received a competitive Asia Power Index score despite the measurement tool being nation-state-centric.

The fact that Meta Platforms scored as a Middle Power on the Asia Power Index is quite impressive. However, if we add to that the fact that this index is nation-state-centric, focusing

quite narrowly on powers that nation-states have, the score they achieved becomes even more noteworthy. Meta Platforms received 84 zeroes (including null-zeros and earned zeros) out of the 131 indicators (64.12 percent) in the Asia Power Index, as it was not eligible to receive a score for many nation-state-centric factors such as having a military, or land, or sovereign wealth funds. Arguably, Meta Platforms' overall score was brought down considerably by factors that are nation-state-centric—and they still thrived. For example, having a military is not the focus of an organization such as Meta Platforms—they do not need a military—they have no land or people to protect, and any threats against them can be considered threats against the US. This is actually a strength for Meta Platforms, where they have the option to put their funds into something other than the military and can “borrow” the United States army in times of danger. Not having a military should contribute positively to Meta Platforms' score—they can put their resources towards other efforts and they do not have other looming nation-state concerns about physical warfare, sovereignty, or land grabs.

The main point is that Meta Platforms rated relatively high, as a Middle Power, on the Asia Power Index, despite the index's nation-state centrality. This highlights the significance of Meta Platforms' power and influence beyond traditional nation-state power criteria.

2. This study demonstrated the use of different types of powers and driving mechanisms of power held by non-state actors.

The findings from R2 indicated distinctive ways in which non-state actors, like Meta Platforms, employ power that sets them apart from nation-states. These powers include wealth and resources power, non-territoriality power, and technological resources power. An important feature about these powers is that their characteristics can feed into and exacerbate one another. These powers and their characteristics feed into one another, acting as driving mechanisms for

more power. This can be seen as a type of positive feedback loop where the power of MNCs such as Meta Platforms continues to increase in multiple ways, expanding the MNC's overall power. Technological Advancement, wealth and resources, and non-location-boundedness provide the underpinning for tech MNCs to evade regulations by having resources to lobby/influence politics/litigate, and by existing in a non-space as an entity that does not fall under nation-state regulation or international regulation. They exist in the international gaps and buy their way out of regulations and responsibilities. Their technology outpaces nation-state technological knowledge so nation-states cannot keep up with what the MNCs doing and how they are doing it, thus keeping nation-states from being able to regulate them. Their evasion of regulations help them dodge repercussions, responsibility, and transparency concerning their actions. MNC's exclusion from regulations also allows them to further increase their domination over their sector(s). This increased domination allows them to continue building huge wealth. This wealth allows for further technological advancement and further resources to compete with nation-state power. This entire process builds more power for MNCs, which also contributes to the decline of nation-state power and democracy worldwide (discussed below), as MNCs eschew nation-state power, gain previously-held nation-state powers, and build new types of power.

3. This study identified shortcomings of current power indexes, which fail to recognize and measure non-state actor power against nation-state power.

Identifying shortcomings of current power indexes, which fail to recognize and measure non-state actor power, is crucial for understanding world power. Due to a lack of non-state actor power measurement, assessments of world power may be remarkably inaccurate.

There are multiple areas where Meta Platforms' power is undervalued. For example, Meta Platforms' remarkably high score in cultural influence is underrated, especially if we consider

results from R3 regarding sections on platforms and information transmission. Likewise, Meta Platforms' power in economic capability is undervalued. Economic capability is key to maintaining the well-being of societies through factors such as employment, standards of living, innovation, global economic competition, and more. Meta Platforms' extremely high score for this indicator signals that they are a competitive and robust entity. However, it is important to point out that these projections under future resources were predictions based off current operations and revenues for Meta Platforms.

Contrastingly, looking at Meta Platforms' lowest sub-score, Diplomatic Influence, for which it received a zero and measured below any other nation-state on the Asia Power Index, the many indicators under this measure are unhelpful in detecting if Meta Platforms really holds significant diplomatic influence power. Indicators such as embassies, UN capital contributions, and political leadership are all counting against Meta Platforms' score, painting a picture of Meta Platforms having little diplomatic influence. However, changing these indicators slightly to allow for a broader application to non-state actors could reveal if Meta Platforms does have more diplomatic influence than the Asia Power Index suggests. Take into consideration the vast political influence Meta Platforms holds concerning its lobbying, economic power, and control over the flow of online information (as stated in RQ3 Results). Does having a vast amount of embassies matter if Meta Platforms exists mostly virtually and does not require the use of an embassy for its users? Does voting in the UN matter if Meta Platforms can force the hand that makes the vote? Does not having land make a difference if Meta Platforms can claim more users than the two most populous nation-states combined? Most of these nation-state-centric indicators are not helpful in indicating some of the most important non-state actor powers. This lesson is

applied in RQ4 to all measures in the Asia Power Index to correct or adjust indicators for a broader non-state actor-centric approach.

Meta Platforms certainly has more power than what the index permits because the index is not measuring important factors for non-state actors (and nation-states as well, one could argue). As the objective of this dissertation is to examine how non-state actors rate against nation-states in terms of world power, it is concerning to find that upon evaluation, there is a significant lack of indicators to measure non-state actor power in general, and to measure non-state actor power against nation-state power.

It is important to accurately measure non-state actor power in order to track the change in power over time. The balance of world power is constantly fluctuating, and it is impossible to know in which way that power is truly moving if we leave out non-state actor power. We have a long history of knowledge concerning nation-state power over time, helping governments and researchers make predictions about where power is moving next. The United States has most recently held the title of one of the great world powers, undulating in strength as it competes with countries such as China and Russia over the last few decades. Today, we know that China is gaining world power dominance, and world governments are able to make crucial decisions for their people with the knowledge of that trend. However, our knowledge of non-state actor power is more anecdotal and subsidiary than knowledge of nation-state-power. Lacking a consistent tool to measure non-state actor power over time means that decisions are being made with only half the story about world power. A ranking of non-state actor power in Forbes magazine is hardly the type of data to be used for making international decisions about world power. It is imperative that the world takes seriously the measurement of non-state actor power, both in and

of itself, and compared to nation-state power. This needs to be done in a meticulous, consistent, and holistic manner.

This study showed that there is a necessity for non-state actor-centric indexes which are geared less toward military, land, and physical materials, and more towards technology, monopolies, regulations, and the non-physical. There needs to be a shift in perspective concerning world power, and this shift should be technopolitically-focused. Non-state actors create technology, thus allowing them to utilize that technology in more commanding ways than nation-states—technology is a huge component of international world power. Power indexes which consider a technopolitical perspective can better encompass non-state actor and nation-state powers. These indexes should add more non-state actor-centric components concerning cultural influence, online influence, control the flow of information, capital mobility, litigational power, and more (see Chapter 7, Results for RQ4 for more examples).

If measured more accurately, with a non-state actor-centric index, there is the possibility that Meta Platforms' power, or any other non-state actor entity's power, could supersede nation-state power—scoring higher than world superpowers such as the United States and China. The following is a discussion of measures on the Asia Power Index which did not count towards Meta Platforms' calculated power because the description was nation-state-specific or slightly different from the power that Meta Platforms holds.

4) The creation of a power index which is appropriate for non-state actor power measurement as well as nation-state-power measurement

Non-state actor power is generally not factored into calculations of global power. Global power is often calculated with power indexes, which are not designed or suitable for measuring

non-state actor power. The indicators which make up power indexes are focused on nation-state power, which is problematic. Lacking tools for measuring non-state actor power can exacerbate the void of non-state actor power considerations. As a solution, this new nation-state & non-state actor power index created in this dissertation can serve to facilitate and encourage consistent calculations of non-state actor power in calculations of global power. This new index provides a path forward toward capturing new types of power for nation-states and non-state actors alike.

Future Regulations

While this dissertation has focused on many non-state actor powers which seem to be uninhibited, it is important to note that nation-states have been combatting non-state actor power and there could be a turn of events to slow down the growth of non-state actor power.

Although this dissertation has primarily addressed the seemingly unchecked powers of non-state actors, it is worth mentioning that nation-states have been actively opposing non-state actor power for some time, and there could be a shift in the future to curb non-state actor power expansion. Certain nation-states have made efforts to regulate these major multinational corporations. For example, in the United States, there have been efforts to reduce the market power of Amazon, Apple, Google, and Facebook (Maggor, 2021). Additionally, in the EU, there was a landmark legislation which took effect in 2018—the General Data Protection Regulation (GDPR), which obligated digital platforms which collect user data to be subject to extensive requirements (Lambert, 2021). As an illustration, one piece of this legislation targets consent to one’s personal data processing. The definition of consent provides digital platforms loopholes to evade this part of the regulation because the definition is narrow enough that the platforms are able to use the term “compliance” in the case that “consent” is not given (D’Cunha, 2021).

Focusing on such issues can result in broader victories for nation-state authority over non-state actor actors.

More regulations are on the table for these leading platforms accused of being gatekeepers. European regulations set for late 2022 are aiming to liberalize these platforms. For example, Meta Platforms may be required to allow WhatsApp users to message people on competing platforms or services. Apple may be required to allow app stores from competitors on their iPhones. Those companies not following these regulations could receive fines of as much as 10 percent of their annual revenue, penalties of as much as five percent of their daily sales, or even a ban on acquisitions. It is expected that these European regulations will set the stage for a new era of regulations for online giants (Jones, 2022). Only time can tell if these big tech giants can find loopholes, change policies, or lobby their way out of future regulations.

Future Research

Future research concerning this topic should include further development of a power index tool with specific indicators identified to measure non-state actor power against nation-state power. The index provided in this dissertation should also be applied to nation-state and non-state actor power to transform this theoretical index into an actual functioning index.

It will also be important to continue to uncover more non-state actor powers and power mechanisms. No index will be perfect, especially when trying to encompass the variety of power in non-state actors and nation-states alike. Therefore, it is recommended that forthcoming research explore diverse non-state actors as case studies, beyond Meta Platforms used in this study, in order to potentially reveal alternative forms of non-state actor power. An instance of such research could be an investigation into the power of cartels, NGOs or terrorist groups, which might disclose novel forms of power that remained unexplored in this study.

It is important for upcoming research to acknowledge the significance of technology in the global power dynamics, and incorporating the concept of technopolitics in future discourse on world power could prove advantageous. Future research should continue to take into account the importance of technology in the global balance of power.

As highlighted in the limitations section, the powers of Meta Platforms were evaluated solely in comparison to 26 other nations. It is recommended that forthcoming research investigate non-state actor power on a larger scale, with the ideal approach being the consideration of all countries globally for more comprehensive comparisons.

Why Pay Attention to Non-State Actor Power?

Given the potential for non-state actor power to be more extensive and pervasive than what is presently understood, there are numerous consequences to consider. Uninhibited and extensive non-state actor power is probably not the objective of any world government, nor the collective wish of all world governments. Aside from that, non-state actor governance can look very different from nation-state governance. As there are many different types of non-state actors, it is important to specify that this discussion is focusing on MNCs as non-state actors.

When Businesses Govern the World

Non-state actor power competing with nation-state power is concerning. There are many potential detriments of non-state actors, especially MNCs, running the world. Namely, MNCs are not democratic, they have little history, and they have a lack of accountability.

MNCs are businesses, meaning that their goals and loyalties lie with their stakeholders and their profits, not with their customers or the general public. Unlike nation-states, MNCs did not experience foundational moments like a population of people tied to territory through blood,

culture, language and history. Unlike nation-states, MNCs have not evolved through revolutions, wars, and elections. MNCs have no constitutions that are expected to be agreed upon by their people. Granted, not all nation-states have these features either. However, the expectations of nation-states to have a responsibility to their people and their well-being is the big difference.

MNCs Contribute to the Decrease of Democracy, Nation-State Power, and Nation-State Sovereignty

The many ways multinational corporations increase their power can simultaneously decrease nation-state power and sovereignty, especially concerning MNCs' tendencies toward authoritarianism and the willing delegation of nation-state powers to non-state actor entities.

Tendencies Toward Authoritarianism

Multinational corporations, as mentioned above, can have strong tendencies toward authoritarianism, making their own laws, executing decisions unilaterally, and owing no loyalty or allegiance to their consumers, users, or home nations. Especially concerning digital platforms, Pohle and Voelson (2022) note that the movement in the digital world toward centralization and authoritarianism is greater than ever before. These tendencies challenge democratic nation-states, ultimately reversing trends toward the legitimacy of nation-state power by damaging people's confidence in law and in democracy.

Nation-States' Willful Delegation of Powers

As mentioned previously, multinational corporations have taken on many functions that a nation-state used to be expected to carry out. Many of these matters were willful delegation of powers from nation-states to non-state actors. Likewise, delegating these functions to non-state actors can be legal and helpful. Nevertheless, nation-states giving away powers can be seen as a

direct example of a loss of nation-state sovereignty (D'Cunha, 2021). The problem with allowing large MNCs to continue their domination is that unlike nation-states, many of which function with checks and balances, these corporations function as they please—with no democratic constitutions, no checks and balances, and no higher authorities.

MNCs have diminished nation-state's authority through their ambiguous boundaries, garnering vast influence and autonomy, using authoritarian mechanisms, and exploiting the disadvantaged, among other mechanisms.

Conclusion

The concept of power has evolved significantly from the past, with technology now playing a pivotal role in determining what constitutes power and how it is characterized. A significant shift in power dynamics is evident, whereby conventional political institutions like nation-states are losing ground to private entities operating in the technology sector, especially multinational corporations. Therefore, technopolitics plays a crucial role in examining the power dynamics of non-state actors. As technology takes center stage in global power dynamics, it could result in power changing hands more frequently, particularly to non-state actors.

International Relations literature has been indicating for some time that the Westphalian world is undergoing transformation, although the extent of this transformation remains uncertain. It is essential to assess global power dynamics, including both non-state actor and nation-state actors, through updated and consistent measurement and comparison of nation-state and non-state actor power.

There is a substantial value in gauging and defining the power that non-state actor entities can wield, as it allows for the identification and measurement of non-state actor power, particularly through the utilization of tools like power indexes. Measuring non-state actor power

with an appropriate index can reveal important information such as helping governments and researchers understand where nation-states have shortcomings in power. Nation-states can use these measurements to make better decisions, to evaluate regulations, and to delineate between international and nation-state jurisdiction and fill in the gaps. To preserve their power or mitigate the decline of their power, nation-states must comprehend the domains where other actors possess or are acquiring power, as well as the areas where their power is vulnerable to threats. Additionally, examining non-state actor power can help determine gaps in international governance. Especially concerning technology, multinational corporations (MNCs) operate in numerous domains where legal frameworks and regulations do not cover their conduct and outcomes. Pointing out MNC power helps elucidate loopholes and evasion of regulations, which can allow international lawmakers to better understand where regulation, transparency and accountability are needed. Of course, a better understanding of MNC power can also lead to a better understanding of world power dynamics. Gaining comprehension of the power wielded by multinational corporations (MNCs) can offer valuable insights into their interactions with other entities in the global arena and illuminate their impact on the dynamics of power. Finally, examining the power of non-state actors can aid in assessing the efficacy of global governance, distinguishing between sound and deficient practices.

This dissertation asks how non-state actors rate, when compared with nation-states, in calculations of national world power, especially considering changing sources of power enabled by technology. By using Meta Platforms as a case study, it was revealed that there is immense potential for non-state actors, such as Meta Platforms, to wield significant world power. This work reveals that Meta Platforms possesses various forms of power that surpass the current capabilities of nation-states. Considering that Meta Platforms is not the largest or most powerful

multinational corporation, it is possible that other MNCs or non-state actors would reveal even greater power standings when compared to nation-states. Overall, it is vital to include non-state actor actors as a conventional component in gauging global power, and this research provides the means to initiate this endeavor earnestly.

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Appendix

Low Index Calculations and Scores When Applied To Meta Platforms

The following table details Asia Power Index scores, calculations, and other information when applied to Meta Platforms. For detail on any data calculations, contact the author.

Table A.1 Asia Power Index Scores and Calculations when Applied to Meta Platforms

Asia Power Index Scores and Calculations when Applied to Meta Platforms						
Measure: Economic Capability 17.5% weight Score 7.33 Ranked #13 (same as Vietnam, above New Zealand, below Malaysia)						
Sub Indicators & Indicators	Score	Parameter measured if different than Asia Power Index	Data	Calculation / Result	Weight	Source
Size	0-100					
GDP	0.25	Revenue	Meta Reports Fourth Quarter and Full Year 2021 Results	Meta revenue for 2021 placed based on nation-states on the Asia Power Index Scale with similar scores	x1	See footnote ²
Total for Size	0.25			Sum of indicator score for Size multiplied by indicator weight and divided by sum of weights	40%	
Normalized total for Size	0.25					
International leverage						
Corporate Giants	0.2		Meta is on the list. #34 for 2022	Placed based on nation-states on the Asia Power	x2	See footnote ³

² Meta Reports Fourth Quarter and Full Year 2021 Results : https://s21.q4cdn.com/399680738/files/doc_financials/2021/q4/FB-12.31.2021-Exhibit-99.1-Final.pdf

³ <https://www.forbes.com/sites/forbesstaff/2022/05/12/forbes-global-2000-list-2022-the-top-200/?sh=202a9c743290>

				Index Scale with similar scores		
Global Reserve Currency	0				x1.5	NA
International Currency Share	0				x1	NA
Official Reserves	0				x1	NA
Export Credit Agencies	0				x1	NA
Sovereign wealth funds	0				x1	NA
Total for International Leverage	0.053			Sum of indicator scores for International Leverage multiplied by individual indicator weights and divided by sum of weights.	20%	
Normalized total for International leverage	0			-0.07333301738		
Technology						
High-tech exports	4.6	Revenue for consumer goods	Based on consumer goods - revenue instead of trade value/ Found countries with similar trade value to Meta's revenue for consumer goods. Issue with this is that we're not counting other exports that other countries could have, such as capital goods, intermediate goods.	Placed based on nation-states on the Asia Power Index Scale with similar scores	x1	see footnote 4
Productivity	100	Revenue	revenue divided by # of employees	revenue divided by # of employees	x1	See footnote 5
Human resources in R&D	1		R&D researchers calculated based on Meta Platform's reported spending on R&D salaries	Placed based on nation-states on the Asia Power Index Scale with similar scores	x1	See footnote 6

⁴ <https://wits.worldbank.org/CountryProfile/en/Country/WLD/Year/2019/TradeFlow/Export/Partner/All/Product/UNCTAD-SoP3>

⁵ <https://ilostat.ilo.org/resources/concepts-and-definitions/description-labour-productivity/> NUMBER of employees for 2021:

<https://www.statista.com/statistics/273563/number-of-facebook-employees/#:~:text=The%20social%20network%20had%2058%2C604,Sandberg%20and%20CFO%20David%20Wehner>

⁶ <https://www.statista.com/statistics/273563/number-of-facebook-employees/#:~:text=The%20social%20network%20had%2058%2C604,Sandberg%20and%20CFO%20David%20Wehner>

R&D spending (% of GDP)	100	R&D % as share of annual revenue	R&D % as share of annual revenue on Meta Reports Fourth Quarter and Full Year 2021. Highest on Lowy scale is 4.5% - so really unfair at 20.9%	Placed based on nation-states on the Asia Power Index Scale with similar scores	x1	See footnote ⁷
Nobel prizes (sciences)	1.6	1 board member	1 for the company if we can count a board member	1	x1	See footnote ⁸
Supercomputers	0.6		1	Placed based on nation-states on the Asia Power Index Scale with similar scores	x1	See footnote ⁹
Satellites Launched	0.1		Has 1 satellite & a satellite team. Sold team to Amazon in 2021. But did launch before sold.	1	x1	See footnote ¹⁰
Renewable Energy	0		6.1 GW BUT contracted	0	x1	See footnote ¹¹
Total for Technology	26.05			Sum of indicator scores for Technology multiplied by individual indicator weights and divided by sum of weights.	20%	
Normalized Total for Tech	32.84					
Connectivity						
Global Exports	2	Used International Revenue	Used International Revenue	Placed based on nation-states on the Asia Power Index Scale with similar scores	x1	See footnote ¹²
Global Imports	0		NA. Approximately 97% of the quarter's total revenue was advertising revenue	0	x1	See footnote ¹³

⁷ Meta Reports Fourth Quarter and Full Year 2021 Results: https://s21.q4cdn.com/399680738/files/doc_financials/2021/q4/FB-12.31.2021-Exhibit-99.1-Final.pdf

⁸ <https://www.theverge.com/2020/5/6/21249427/facebook-oversight-board-nobel-peace-prize-instagram-snowden>

⁹ <https://www.top500.org/statistics/sublist/>

¹⁰ <https://www.ucsusa.org/resources/satellite-database>

¹¹ <https://tech.facebook.com/engineering/2021/04/renewable-energy/>

¹² <https://www.businessofapps.com/data/facebook-statistics/> <https://theconversation.com/facebook-profits-from-canadian-media-content-but-gives-little-in-return-146385>

¹³ Meta Reports Fourth Quarter and Full Year 2021 Results: https://s21.q4cdn.com/399680738/files/doc_financials/2021/q4/FB-12.31.2021-Exhibit-99.1-Final.pdf

Global Investment Outflows (%)	1.4	\$5.7 billion Jio Platforms acquisition	Large transactions included the acquisition of Jio Platforms by Jaadhu (a subsidiary of Facebook (United States)) for \$5.7 billion	Placed based on nation-states on the Asia Power Index Scale with similar scores (did 1 year average)	x1	See footnote ¹⁴
Global Investment Inflows (%)	0	NA.	Only vanguard owns 10% (and Zuckerberg, and Accord (both American) own more than 10% insider stocks as well)	0	x1	See footnote ¹⁵
Merchant Fleet	0				X 0.5	NA
Travel Hubs	22	Direct flights from index countries to San Francisco or nearby airports	Direct international flights from: San Francisco International Airport (SFO), Oakland International Airport (OAK), San Jose International Airport (SJC), Charles M. Schulz Sonoma County Airport (STS)	Placed based on nation-states on the Asia Power Index Scale with similar scores	X 0.5	See footnote ¹⁶
Total for Connectivity	2.88			Sum of indicator scores for Connectivity multiplied by individual indicator weights and divided by sum of weights	20%	
Normalized total for Connectivity	3.30					
TOTAL FOR ECONOMIC CAPABILITY	7.33		normalized #s	Sum of sub-measure scores for Economic Capability multiplied by individual sub-measure weights		
Measure: Military Capability 17.5% weight Score 3.3612 Ranked #21 (below Bangladesh, above Mongolia)						
Sub Indicators & Indicators	Score	Parameter measured if different than Asia	Data	Calculation / Result	Weight	Source

¹⁴ https://unctad.org/system/files/official-document/wir2021_en.pdf <https://about.fb.com/news/2020/04/facebook-invests-in-jio/>

¹⁵ <https://www.nasdaq.com/market-activity/stocks/meta/institutional-holdings>

¹⁶ <http://nonstopfrom.com/santa-rosa-sts/>

		Power Index				
Defence spending						
Military expenditure, market exchange rates	0				x1	NA
Military expenditure, defence sector PPP	0				x1	NA
Total for Defence spending	0			Sum of indicator scores for Defence Spending multiplied by individual indicator weights and divided by sum of weights	20%	
Normalized total for Defence spending	0					
Armed forces						
Military and paramilitary forces	0				x 2	See footnote 17
Training, readiness and sustainment	100	Facebook survivability without the United States	For example, if the US was nuked, how sustainable is Meta Platforms in terms of non-US centers? Can they survive without the US? Refer to article on remote work in footnote 18 and this article that top executives are already working outside the US, remotely in footnote 17 ¹⁸	Placed based on nation-states on the Asia Power Index Scale with similar scores based on complete business survivability	X 0.5	See footnote 19
Organisation: Combat Experience	0				X 0.25	NA
Organisation: Command and control	0				X 0.25	NA
Total for Armed Forces	16.66			Sum of indicator scores for Armed Forces multiplied	20%	

¹⁷ <https://www.bloomberg.com/news/articles/2021-09-21/facebook-says-it-has-spent-13-billion-on-safety-security#xj4y7vzkg>

¹⁸ <https://www.hcamag.com/us/specialization/benefits/meta-embraces-work-from-anywhere-ahead-of-return-to-office/400130>

¹⁹ <https://sg.style.yahoo.com/facebook-remote-made-permanent-offices-031504070.html> AND <https://www.hcamag.com/us/specialization/benefits/meta-embraces-work-from-anywhere-ahead-of-return-to-office/400130>

				by individual indicator weights and divided by sum of weights		
Normalized total for Armed Forces	16.80					
Weapons and platforms.						
Land warfare: Manoeuvre	0				x1	NA
Land warfare: Firepower	0				x1	NA
Maritime warfare: Sea control	0				x1	NA
Maritime warfare: Fire Power	0				x1	NA
Maritime warfare: Sea denial	0				x1	NA
Air warfare: Fighters	0				x1	NA
Air warfare: Enablers	0				x1	NA
Technology, maintenance and range	0				x1	NA
Total for Weapons and Platforms	0			Sum of indicator scores for Weapons and Platforms multiplied by individual indicator weights and divided by sum of weights	25%	
Normalized total for Weapons and Platforms	0					
Signature capabilities						
Ground-based missile launchers	0				x1	NA
Ballistic missile submarines	0				x1	NA
Long-range maritime force projections	0				x1	NA
Area denial capabilities	0				x1	NA
Intelligence capabilities	0				X 0.5	NA

Cyber capabilities	0				X 0.5	NA
Total for Signature Capabilities	0			Sum of indicator scores for Signature Capabilities multiplied by individual indicator weights and divided by sum of weights	25%	
Normalized total for Signature Capabilities	0					
Asian military posture						
Ground forces deployment	0				x1	NA
Naval deployment	0				x1	NA
Total for Asian military posture	0				10%	
Normalized total for Asian Military Posture	0			Sum of indicator scores for Asian Military Posture multiplied by individual indicator weights and divided by sum of weights		
TOTAL FOR MILITARY CAPABILITY	3.361 2		normalized #s	Sum of sub-measure scores for Military Capability multiplied by individual sub-measure weights		
Measure: Resilience 10 % weight Score 18.83 Ranked #24 (above Laos, below Myanmar)						
Sub Indicators & Indicators	Score	Parameter measured if different than Asia Power Index	Data	Calculation / Result	Weight	Source
Internal stability						
Government effectiveness	0		They do not have a government.		x2	NA

Political stability	100		Based on World Bank definition of political stability (see footnote 19). These issues are not central to Meta employees. Also concerning political stability - Mark Zuckerberg has always been CEO/Owner/chairman/biggest shareholder –no question that he remains in power.	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x1	See footnote ²⁰
Climate change resilience	0		Meta is not resilient to threats like water risk, etc. Dependent on the US.		x1	See footnote ²¹
Internal conflict years	100		No armed conflict		X 0.5	
High-intensity internal conflict years	100		No armed conflict		X 0.5	
Infant mortality	100		No infant mortality		x1	
Covid-19 vaccinations	87	number of vaccines	Based on fully-vaccinated rates of locations in which the majority of Meta Platforms Employees work (CA, WA, NY)	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x1	See footnote ²²
Total for Internal Stability	55.28			Sum of indicator scores for Internal Stability multiplied by individual indicator weights and divided by sum of weights	17.5 %	
Normalized total for Internal Stability	48.53					

²⁰

[https://databank.worldbank.org/metadataglossary/1181/series/PV.EST#:~:text=Political%20Stability%20and%20Absence%20of%20Violence%2FTerrorism%20measures%20perceptions%20of,%2Dmotivated%20violence%2C%20including%20terrorism.and file:///C:/Users/Misty%20Prigent/Downloads/pv%20\(1\).pdf](https://databank.worldbank.org/metadataglossary/1181/series/PV.EST#:~:text=Political%20Stability%20and%20Absence%20of%20Violence%2FTerrorism%20measures%20perceptions%20of,%2Dmotivated%20violence%2C%20including%20terrorism.and file:///C:/Users/Misty%20Prigent/Downloads/pv%20(1).pdf)

²¹ <https://www.visionofhumanity.org/maps/ecological-threat-register-2021/#/>

²² <https://www.cnbc.com/2022/04/01/meta-says-employees-wont-need-covid-boosters-to-come-to-us-offices.html> AND <https://www.builtinsf.com/2020/02/25/facebook-headquarters-menlo-park-office> AND <https://www.geekwire.com/2021/facebook-inks-another-lease-seattle-area-now-7k-employees-3-3m-square-feet/> AND <https://www.bloomberg.com/news/articles/2021-05-25/facebook-to-bring-back-manhattan-office-workers-starting-in-july#:~:text=Facebook%20has%20roughly%204%2C000%20employees,some%20changes%20when%20workers%20return.> AND <https://austonia.com/facebook-austin-tallest-tower/> AND <https://usafacts.org/visualizations/covid-vaccine-tracker-states/state/new-york#:~:text=In%20New%20York%2C%2017%2C878%2C519%20people,population%20are%20considered%20fully%20vaccinated>

Resource security						
Energy trade balance	0		No coal production, etc.		x1	See footnote 23
Energy self-sufficiency	0		100% renewable energy but it's all contracted, so not self-sufficient.		x1	See footnote 24
Fuel trade balance	0				x1	NA
Fuel security	100		Technically no deficit: an excess of expenditure or liabilities over income or assets in a given period.		x1	NA
Rare-earth metals supply	0				X 0.5	NA
Total for Resource security	22.22			Sum of indicator scores for Resource Security multiplied by individual indicator weights and divided by sum of weights	17.5 %	
Normalized total for Resource security	0			technically -4.32		
Geoeconomic security						
Diversity of export products	0		Owns 91 companies. But the Witis list (footnote 24) includes basic materials and products --not finished products or technology. Mostly tangible.		x1	See footnote 25
Diversity of export markets	0		0 – refer to diversity of expert products		x1	See footnote 26
Dependency on global trade	100		Not dependent as Most revenue from Ads, not trade. Ads is different category.	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x1	
Dependency on primary trade partner	100		No dependency. Refer to Dependency on global trade.	Placed based on nation-states on the Asia Power	x1	

²³ <https://www.iea.org/reports/world-energy-balances-overview>

²⁴ <https://sustainability.fb.com/wp-content/uploads/2022/06/Meta-2021-Sustainability-Report.pdf>

²⁵ <https://wits.worldbank.org/trade/country-byhs6product.aspx?lang=en> AND [https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Meta_Platforms#:~:text=Meta%20Platforms%20\(formerly%20Facebook%2C%20Inc,91%20other%20companies%2C%20including%20WhatsApp.](https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Meta_Platforms#:~:text=Meta%20Platforms%20(formerly%20Facebook%2C%20Inc,91%20other%20companies%2C%20including%20WhatsApp.)

²⁶ 0 because last one was zero

				Index Scale with similar scores.		
Total for Geoeconomic security	50			Sum of indicator scores for Geoeconomic Security multiplied by individual indicator weights and divided by sum of weights	17.5 %	
Normalized total for Geoeconomic security	34.04					
Geopolitical security						
Population relative to neighbours	0		NA (no population and no neighboring countries if we were counting employees instead of population)		x1	
Landmass deterrent	0		Land owned is not sovereign nor occupied by their employees (population).		x1	²⁷ See footnote
Demographic deterrent	0		Using employees as population--none live within owned territory.		x1	
Interstate conflict legacies	100		No interstate conflict history		X 0.5	
Boundary disputes	100		No boundary disputes - no sovereign land owned with population within it.		X 0.5	
Total for Geopolitical security	25			Sum of indicator scores for Geopolitical Security multiplied by individual indicator weights and divided by sum of weights	17.5 %	
Normalized total for Geopolitical security	25.06					
Nuclear deterrence						
Nuclear weapons capability	0				x1	NA
Nuclear weapons range	0				x2	NA
Ground-based nuclear missile launchers	0				x1	NA

²⁷²⁷ <https://www.theguardian.com/technology/2021/dec/28/mark-zuckerberg-110-acres-hawaii>

Nuclear second-strike capability	0				x1	NA
Total for Nuclear deterrence	0			Sum of indicator scores for Nuclear Deterrence multiplied by individual indicator weights and divided by sum of weights	30%	
Normalized total for Nuclear deterrence	0					
TOTAL FOR RESILIENCE	18.83		normalized #s	Sum of sub-measure scores for Resilience multiplied by individual sub-measure weights		
Measure: Future Resources 10% weight Score 37.41 Ranked #4 (below India, above Russia)						
Sub Indicators & Indicators	Score	Parameter measured if different than Asia Power Index	Data	Calculation / Result	Weight	Source
Economic resources 2030						
GDP baseline	0.25	Revenue	Meta Reports Fourth Quarter and Full Year 2021 Results	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x0	See footnote ²⁸
GDP forecast 2030	0.45		2030 Revenue Forecast	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x1	²⁹ See footnote
Economic capability 2030	100		Employee growth based on total revenue growth projection. 109.151% increase definitely puts them at 100 score.	Placed based on nation-states on the Asia Power Index Scale with similar scores.	X 0.5	

²⁸ Meta Reports Fourth Quarter and Full Year 2021 Results : https://s21.q4cdn.com/399680738/files/doc_financials/2021/q4/FB-12.31.2021-Exhibit-99.1-Final.pdf

²⁹ <https://stockforecast.com/FB>.

Total for Economic resources 2030	33.63			Sum of indicator scores for Economic Resources multiplied by individual indicator weights and divided by sum of weights	25%	
Normalized total for Economic resources 2030	35.24					
Defence resources 2030						
Military expenditure baseline	0				x0	NA
Military expenditure forecast 2030	0				x1.5	NA
Military capability enhancement 2022-30	0				x1	NA
Total for Defence resources 2030	0			Sum of indicator scores for Defence Resources 2030 multiplied by individual indicator weights and divided by sum of weights	25%	
Normalized total for Defence resources 2030	0					
Broad resources 2030						
Estimated broad resources 2030	29.52			Sum of Economic capability score, military capability score and resilience score: 29.5212	x1	
Total for Broad resources 2030	29.52			Sum of indicator scores for Broad Resources 2030 multiplied by individual indicator weights and divided by sum of weights	30%	

Normalized total for Broad resources 2030	28.69					
Demographic resources 2050						
Working-age population baseline	100		Population as employees. All employees are working age.		x0	See footnote ³⁰
Working-age population forecast 2050	100		Population as employees. All employees are working age.		x1.5	See footnote ³¹
Labour dividend 2020-50	100		Based on quality of worker divided by GDP per worker. (Extremely high, refer to production).	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x1	
Total for Demographic resources 2030	100			Sum of indicator scores for Demographic Resources 2030 multiplied by individual indicator weights and divided by sum of weights	20%	
Normalized total for Demographic resources	100					
TOTAL FOR FUTURE RESOURCES	37.41		normalized #s	Sum of sub-measure scores for Future Resources multiplied by individual sub-measure weights		
Measure: Economic Relationships 15% weight Score 0.21 Ranked #26 (below Nepal, above North Korea)						
Sub Indicators & Indicators	Score	Parameter measured if different than Asia Power Index	Data	Calculation / Result	Weight	Source
Regional trade relations						

³⁰ Number of employees for 2021: <https://www.statista.com/statistics/273563/number-of-facebook-employees/#:~:text=The%20social%20network%20had%2058%2C604,Sandberg%20and%20CFO%20David%20Wehner>

³¹ Number of employees for 2021: <https://www.statista.com/statistics/273563/number-of-facebook-employees/#:~:text=The%20social%20network%20had%2058%2C604,Sandberg%20and%20CFO%20David%20Wehner>

Trade with region	0.6	Regional revenue instead of trade	Revenue in index countries except for US	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x1	See footnote ³²
Primary trade partner	0				x1	NA
Regional selling power	0				x1	NA
Regional buying power	0				x1	NA
Total for Regional trade relations	0.6			Sum of indicator scores for Regional Trade Relations multiplied by individual indicator weights and divided by sum of weights	35%	
Normalized total for Regional trade relations	0.6					
Regional investment ties						
Foreign investment in region	0		Not investing in countries.	0	x1	NA
Primary foreign investor	0				x1	NA
Average share of foreign investment	0				x1	NA
Investment attractiveness	0				X 0.5	NA
Total for Regional investment ties	0			Sum of indicator scores for Regional Investment Ties multiplied by individual indicator weights and divided by sum of weights	35%	
Normalized total for Regional investment ties	0					
Economic diplomacy						
Global FTAs	0				x1	NA
Regional FTAs	0				x1	NA

³² <https://www.businessofapps.com/data/facebook-statistics/>

Foreign assistance (global)	0				x1	NA
Foreign assistance (regional)	0				x1	NA
Total for Economic diplomacy	0			Sum of indicator scores for Economic Diplomacy multiplied by individual indicator weights and divided by sum of weights	30%	
Normalized total for Economic diplomacy	0					
TOTAL FOR ECONOMIC RELATIONSHIPS	0.21		normalized #s	Sum of sub-measure scores for Cultural Influence multiplied by individual sub-measure weights		
Measure: Defense Networks 10% weight Score 0 Ranked #26 (same as Papua New Guinea)						
Sub Indicators & Indicators	Score	Parameter measured if different than Asia Power Index	Data	Calculation / Result	Weight	Source
Regional alliance network						
Regional military alliances	0				x1	NA
Allied foreign forces	0				x1.5	NA
Joint training (allies)	0				x1	NA
Combined operation years (allies)	0				x1	NA
Arms procurements (allies)	0				x1	NA
Alliance force multiplier	0				X 0.5	NA

Total for Regional Alliance Network	0			Sum of indicator scores for Regional Alliance Network multiplied by individual indicator weights and divided by sum of weights		
Normalized total for Regional Alliance Network	0					
Regional defence diplomacy						
Defence dialogues	0				x1	NA
Defence consultation pacts	0				x1	NA
Foreign forces and deployments	0				x1.5	NA
Joint training (non-allies)	0				x1	NA
Combined operation years (non-allies)	0				x1	NA
Arms procurements (non-allies)	0				x1	NA
Total for Regional defence diplomacy	0			Sum of indicator scores for Regional Defence Diplomacy multiplied by individual indicator weights and divided by sum of weights		
Normalized total for Regional defence diplomacy	0					
Global defence partnerships						
Global arms trade	0				x1.5	NA
Arms export partnerships	0				x1	NA
Total for Global Defence Partnerships	0			Sum of indicator scores for Global Defence Partnerships		

				multiplied by individual indicator weights and divided by sum of weights		
Normalized total for Global Defence Partnerships	0					
TOTAL FOR Defence networks	0		normalized #s	Sum of sub-measure scores for Defence Networks multiplied by individual sub-measure weights		
Measure: Diplomatic Influence 10% weight Score 0 Ranked #26 (lowest of all by far)						
Sub Indicators & Indicators	Score	Parameter measured if different than Asia Power Index	Data	Calculation / Result	Weight	Source
Diplomatic network						
Embassies (regional)	0				x1	NA
Embassies (global)	0				x1	NA
Second-tier diplomatic network (regional)	0				x1	NA
Total for Diplomatic network	0			Sum of indicator scores for Diplomatic Network multiplied by individual indicator weights and divided by sum of weights		
Normalized total for Diplomatic network	0					
Multilateral power						

Summits, clubs and organisations	0		Participation in select summits, etc. based on nation-state. So NA		x1	NA
Institutional voting shares	0		NA - just for nation-states.		x1	NA
UN capital contributions	0				x1	NA
Voting alignment	0				X 0.5	NA
Voting partners	0				X 0.5	NA
Total for Multilateral power	0			Sum of indicator scores for Multilateral Power multiplied by individual indicator weights and divided by sum of weights		
Normalized total for Multilateral power	0					
Foreign policy						
Political leadership (regional)	0				x1	NA
Political leaderships (global)	0				x1	NA
Strategic ambition	0				x1	NA
Diplomatic service	0				x1	NA
Covid-19 response	0				X 0.5	NA
Vaccine donations	0				X 0.5	NA
Vaccine donations (per capita)	0				X 0.25	NA
Total for Foreign policy	0			Sum of indicator scores for Foreign Policy multiplied by individual indicator weights and divided by sum of weights		
Normalized total for Foreign policy	0					
TOTAL FOR DIPLOMATIC INFLUENCE	0		normalized #s	Sum of sub-measure scores for Diplomatic Influence		

				multiplied by individual sub- measure weights		
Measure: Cultural Influence 10% weight Score 54.35 Ranked #3 (below China, above Japan)						
Sub Indicators & Indicators	Score	Parameter measured if different than Asia Power Index	Data	Calculation / Result	Weight	Source
Cultural projection						
Online search interest	100		Average of all 26 countries' google searches % for "Facebook" in 2021. Searches for "Meta Platforms" not yet caught on. Only performed on Google, not Baidu (no access)	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x2	See footnote ³³
Cultural exports	0				x1	See footnote ³⁴
Global brands	1		2= 1 facebook, 1 instagram,	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x1	See footnote ³⁵
Prestige: Skyscrapers	0		Technically 1, but it's leasing, that one's still being built, and they're not using the whole building.		x1	See footnote ³⁶
Status: Visa-free travel	0			NA	X 0.5	NA
Cultural heritage	0			NA	X 0.5	NA

³³ <https://trends.google.com/trends/explore?q=facebook> Average of all 26 countries' google searches % for "Facebook" in 2021 for ALL 26 index countries

³⁴ <https://en.unesco.org/news/cultural-goods-economic-driver-digital-age>

³⁵ <https://brandirectory.com/rankings/global/2021/table>

³⁶ <https://www.desmoinesregister.com/story/news/local/altoona/2021/12/15/facebook-data-center-locations-meta-stock-altoona-site-largest-country/8899645002/> AND <https://www.kvue.com/article/money/economy/boomtown-2040/meta-facebook-largest-austin-tower-lease/269-f9284374-d11e-479d-9c15-a83a96db2f67> AND https://www.skyscrapercenter.com/explore-data?output=list&statuses%5B%5D=COM&statuses%5B%5D=UC&statuses%5B%5D=REN&height=150®ion_id=&country_id=&city_id=&min_year=&max_year=&filter_company=&output=list

Total for Cultural projection	33.5			Sum of indicator scores for Cultural Projection multiplied by individual indicator weights and divided by sum of weights	40%	
Normalized total for Cultural projection	40.71					
Information flows						
Asia-Pacific international students	0				x1	NA
Regional influence: News Agencies	68.66		All index countries' interest for Facebook News	Placed based on nation-states on the Asia Power Index Scale with similar scores.	x1	See footnote ³⁷
Regional influence: Newspapers	0		No print newspaper	NA	x1	NA
Regional influence: TV broadcasters	0		Doesn't do broadcast TV	NA	x1	NA
Regional influence: Radio broadcasters	0		Meta doesn't have radio. It has internet "live audio"		x1	NA
Total for Information flows	13.73			Sum of indicator scores for Information Flows multiplied by individual indicator weights and divided by sum of weights	30%	
Normalized total for Information flows	13.64					
People exchanges						
Diaspora influence	0				x1	NA
Migrant drawing power	0				x1	NA
Regional travel destination	0				x1	NA
Regional travel connectivity	0				x1	NA

³⁷ <https://trends.google.com/trends/explore?date=2021-01-01%202021-12-31&q=facebook%20news>

Total for People exchanges	0			Sum of indicator scores for People Exchanges multiplied by individual indicator weights and divided by sum of weights	30%	
Normalized total for People exchanges	0					
TOTAL FOR Cultural influence	54.35		normalized #s	Sum of sub-measure scores for Cultural Influence multiplied by individual sub-measure weights		

Measures Meta Platforms Did Not Qualify for on the Asia Power Index

There were multiple indicators on the Asia Power Index which did not count towards Meta Platforms' power because their description was nation-state-specific or slightly different than the power that Meta Platforms holds. These were considered and used for research question 4.

For example, the Asia Power Index measured Nobel Prizes in the sciences, which counted high achievements in physics, chemistry and physiology or medicine. Meta Platforms' score for this indicator was low, both due to the fact that their relatively small (in comparison to nation-state populations) employee count was considered as the population from which the Nobel Prizes could have been won, but also Nobel prizes aren't the only way to measure high achievement when looking at a technology conglomerate. The Turing award, "...an annual award granted by the Association of Computing Machines (ACM) to a person chosen for contributions of lasting technical importance in the field of computers, which is similar to the Nobel Prize but is awarded to computer scientists only" (Yaqoob, 2019) might be an appropriate

substitution or addition to this category. In 2019 a Meta Platforms employees received the Turing award. If this would have been counted in the Asia Power Index, it would have moved Meta Platforms to 5th place, tying with Russia for having 2 awards in this category. Additional award types should be considered for this indicator.

For the supercomputers indicator, which counts the number of supercomputers in the global top 500, Meta Platforms scored quite low as they only had one supercomputer. However, measuring supercomputers as an indicator for technological power is not comprehensive. For example, the AI that contributes to the power of supercomputers is also important, and Meta Platforms' AI capabilities are vast. Looking at data as a technological power could also be useful indicators for this category. It is widely known that Meta Platforms has one of the world's best data collection systems. "Aside from Google, no other business has such extensive data collected on users' likes, dislikes, interests, and online behavior. With so much data, Meta knows precisely what to offer its users and how to improve their experiences on its platforms" (Smith, 2021, p1).

In categories under Military Capability, we find indicators such as defense spending, intelligence capabilities, and cybersecurity. However, these are all related to nation-state militaries. Meta Platforms does have considerable resources concerning defense, intelligence, and security, especially cybersecurity, but these aren't related to warfare. Under military expenditure, if we counted cybersecurity as an expenditure related to military capability (as this is one of the best ways Meta Platforms can protect itself from threats), we find that Meta Platforms spent 3.7 billion dollars in 2021 on cybersecurity (Roettgers, 2019). Just looking at cybersecurity alone, this would place Meta Platforms in 20th place, just under New Zealand and above seven other countries on the Asia Power Index for the indicator of military expenditure.

Alternatively, we could look at this sub-measure of defense spending and say that since Meta Platforms didn't have to spend money on defense, because the countries in which Meta Platforms employees live provide defense for those people, then not spending money on defense is a benefit. This could flip the scores, giving Meta Platforms the highest score for not having spent anything on military defense.

For military forces, if we counted Meta Platforms' safety and security employees, Meta Platforms was found to have 40,000 safety and security employees (including contracted employees) (Wagner, 2021). This would place Meta Platforms 23rd place on the Asia Power Index for this measure, just below Singapore and above four other countries on the index.

For combat experience, if we instead substituted how Meta Platforms has dealt with previous hackers and threats, we could see that they do indeed have experience and success in this type of combat. For example, Meta Platforms' Adversarial Threat Report provides examples of "finding and removing deceptive campaigns around the world", including Russian threats that they've taken down comprising of "...1,633 accounts, 703 Pages, one Group and 29 accounts on Instagram" in 2022 alone (Meta Platforms B, 2022). And these threats are only under the Russian category—the report also mentions threats from China and the US, with networks originating in a myriad of other countries.

For cyber capabilities, defined as "Defensive and offensive cyber capabilities" and under the Military Capability measure, we could instead examine cyber capabilities not related to military. It is well known what sort of capability Meta Platforms holds in terms of altering or influencing elections, its ability to incite violence, and more. For example, Denton (2019) explains how,

“... a number of Russian hackers created fake Facebook profiles of American citizens and used these profiles to purchase and design politically divisive Facebook advertisements... to promote the 2016 presidential election of Donald Trump, to cause political division in America, and to foster distrust of the American media. Using Facebook’s Core Audience and Custom Audience tools exactly as they are supposed to be used, the Agency’s fake advertisements reached 126 million Facebook users” (Denton, 2019, p. 183).

Whether or not Meta Platforms or other countries are utilizing Facebook’s cyber capabilities, power that Meta Platforms holds here is immense.

If we decided to consider Meta Platforms’ organizational structure as a “government”, then under Resilience, for government effectiveness, we could also generate a measurement for this indicator. Many have argued that Meta Platforms acts like an autocratic regime, where “Zuckerberg is the chair, chief executive officer, and controlling shareholder of Facebook” (Farrell et al., 2018). If we looked at other autocratic governments on the Asia Power Index, such as Russia (ranked 16th) or North Korea (ranked 26th, last), Facebook could place somewhere between 16th and last on the index, potentially boosting Meta Platforms’ ranking for this indicator, which is currently at zero for not being measurable since it doesn’t qualify as a government.

For the Asia Power Index’s indicator, Diversity of Export Products, Meta Platforms didn’t qualify because the list used, the World Integrated Trade Solution list, (World Bank, 2023) is composed primarily of tangible materials and products, largely excluding digital products like those that Meta Platforms exports. Meta Platforms owns 91 companies and produces many diverse digital products. If we tallied these products and counted them under this indicator, Meta Platforms would have a good chance of obtaining a high score in this indicator.

Under the measure of Resilience, Population Relative to Neighbors, defined as “Population as a share of neighbouring country populations” is an indicator that is very nation-

state-centric and dependent on location-boundedness. Where non-nation-states can be non-location bound, this indicator can make non-nation-states seem disadvantaged when they may not be. If we tried to apply this indicator to Meta Platforms, we would first have to choose a location that Meta Platforms is primarily based (perhaps in California in the US where its headquarters is located). Then we could either count employees as the population, giving Meta Platforms still quite a low score for this indicator (Meta Platforms scored zero in the original calculation), or if we decided to use Meta Platforms' user numbers as its population, Meta Platforms' 2.45 billion users would surpass all nations in the world, providing Meta Platforms potentially the highest score for this indicator.

Another indicator under the Resilience Measure, Landmass Deterrent, defined as "Country landmass, square kilometres" is also quite nation-state-centric and dependent on location-boundedness. Because Meta Platforms is not a nation-state with landmass and has no land where its own population resides (although, as mentioned above, Zuckerberg does own 1400 acres or 5 km² of land), Meta Platforms would still score quite low here. Nevertheless, this indicator doesn't leave room for non-nation-states. There are many arguments for how not having land is beneficial. For example, since Meta Platforms has no land, they are less susceptible to bombings and nuclear weapon threats.

For the indicator Demographic Deterrent, defined as "Total population", Meta Platforms was disqualified because it doesn't have a population (neither employees nor users) living within its owned land. For this reason, it scored a zero. However, Meta Platforms' employees and user numbers are not negligible, and Meta Platforms could end up with similar potential results to Population Relative to Neighbors. We could either count employees as the population, giving Meta Platforms still quite a low score for this indicator or if we decided to use Meta Platforms'

user numbers as its population, Meta Platforms' 2.45 billion users would surpass all nations in the world, providing Meta Platforms the highest score for this indicator.

Under the measure of Diplomatic Influence are three indicators for Embassies and Consulates: Regional Embassies, Global Embassies (defined as "Number of embassies, high commissions and permanent missions) and Second-tier diplomatic network, (defined as "Consulates and other representative offices"). Because Meta Platforms is not a nation-state, it doesn't have embassies, commissions, permanent missions, or consulates, so was disqualified from this indicator, resulting in a zero score. However, Meta Platforms does have a headquarters, and offices domestically and internationally. If we were to count Meta Platforms' Headquarters in the Regional Embassies indicator, Meta Platforms would still score a zero. However, counting Meta Platforms' international offices in either the Global Embassies indicator, or the Second-tier diplomatic network indicator, Meta Platforms' 45 offices worldwide (not counting US offices) would put Meta Platforms in 18th place for Global Embassies or 3rd place in the Second-tier diplomatic network indicator on the Asia Power Index.

Under the Diplomatic Influence measure, Meta Platforms was also disqualified from the indicator Summits, Clubs and Organizations, defined as "Membership in select summits, diplomatic clubs and regional intergovernmental organisations" because participation in this indicator was based on nation-state participation. Because Meta Platforms is not a nation-state, this indicator excluded Meta Platforms from being counted. However, Meta Platforms does participate in over 100 Associations, Coalitions, and Membership associations as well as 97 Third-Party groups (Meta Platforms, 2023), as well as participation in summits, conferences, and conventions (Meta Platforms, 2021b). It is hard to determine where Meta Platforms might score in this indicator, as there were only 17 selected summits, organizations and clubs chosen for this

indicator. A new list of summits, organizations, and clubs might need to be chosen for non-nation-states and nation-states alike in order to assess where Meta Platforms or other nation-states would fall in this indicator.

Meta Platforms also scored a zero for three categories under Diplomatic Influence: Regional Political Leadership, Global Political Leadership, and Strategic Ambition defined as “Efficacy of political leaders in advancing their country’s diplomatic interests in Asia”, “Efficacy of political leaders in advancing their country’s diplomatic interests Globally”, and “Extent to which political leaders demonstrate strategic ambition” respectively. Meta Platforms was disqualified from these three indicators because it is technically not led by a political leader. However, if we counted Mark Zuckerberg as a political leader for these indicators, one could certainly argue for a score much larger than zero (what Meta s Platforms cored in each of these indicators), considering how much power Zuckerberg holds over Meta Platforms and how he has grown the company over the years. Zuckerberg was the 10th on Forbes list of the World’s Most Powerful People in 2016 and 13th on Forbes list of the World’s Most Powerful People in 2018 (Forbes, 2018). Zuckerberg was the youngest CEO on Fortune 500 in 2013, and grew Facebook from a small social media site in 2004 to the world’s largest social media platform by 2009 (Boyd, 2019). Looking at definitions of the indicators such as efficacy of advancing diplomatic interests, extent of political leaders demonstrating strategic ambition, Facebook could come out with high scores on all three of these categories.

Under the measure of Diplomatic Influence, the indicator for Vaccine Donations, defined as “Doses of Coronavirus (Covid-19) vaccines donated and delivered to the region”, Meta Platforms scored zero because it did not donate actual vaccines. However, Meta Platforms did

donate 20 million dollars to the United Nations Foundation (UNF), the World Health Organization, and the CDC toward COVID-19 efforts (Singh, 2020). Recognizing that getting actual vaccine doses was difficult near the onset of the pandemic, and that vaccine prices changed over time, a rough calculation of doses costing around 10 dollars each (Meredith, 2020), 20 million dollars donated by Meta Platforms could be equivalent to around 2 million 10-dollar doses. This would rank Facebook 5th on the Asia Power Index, just below Australia for Vaccine Donations.

Under the measure of Cultural Influence, Meta Platforms scored zero for the Regional Influence: Radio Broadcasters indicator, defined as “Online interest for a given Index country's public radio broadcaster(s) in 24 other Index countries” because Meta Platforms does not have a public radio broadcaster. However, Meta Platforms does have Facebook Live Audio, introduced in 2016, which is an online radio. Running a quick Google Trends report for each of the 26 index countries, interest for Meta Platforms’ Facebook Live Audio ranked 3rd place for this indicator (see appendix for more details).

The main point of this section is to show that while my measurements were conservative, more liberal substitutions and less nation-state-centric indicators would certainly elucidate Meta Platforms powers. There is a missed opportunity to count the power of Meta Platforms (and other non-nations) in a minimum of 18 indicators, but potentially many more. If Meta is ranking #17 with these very conservative measures, then Meta Platforms is certainly more powerful than this index shows. It is necessary to create larger categories that can allow for substitution and encompass a wider variety of options not so geared toward military or nation-state-centrism. The appendix provides a table that summarizes Meta Platforms’ strengths from R1 that could have been substituted for similar powers.

Possible Substitutions for R1 Powers

The following table details possible indicator substitutions for Meta Platforms. These substitutions were not used in place of the original Asia Power Index metric, so as to keep the measurements for Meta Platforms conservative (see more in the discussion on Chapter 5 under Data Sources and Substitutions). If this study were to use a less conservative approach, using these substitutions would likely result in a much higher Asia Power Index score for Meta Platforms. In all cases, Meta Platforms ranked 26th for these indicators. The rightmost column shows the indicator rank Meta Platforms could have received if these substitutions were used.

Table A.2 Meta Platforms’ Strengths From R1 That Could Have Been Substituted

Meta Platforms’ strengths from R1 that could have been substituted			
Indicator	Issue	Substitution	Meta’s Potential Indicator Rank (in place of the 0 it received) in comparison to other nation-states
Nobel Prizes	Small employee “population” count / not geared toward technology	Turing Award	5 th
Number of Supercomputers	Supercomputers is a narrow measurement for technological capability	AI technology	Uncalculated
Military Defense Spending, Military intelligence capabilities, and Military cybersecurity	Meta has no military, but they do have spending concerning defense, intelligence and cybersecurity	Cybersecurity defense spending (non-military related)	20 th
Military Forces	Meta has no military	Meta’s safety and security employees	23 rd
Combat Experience	Meta isn’t a country and doesn’t take place in military combat	Meta’s experience combatting hackers and threats	Uncalculated
Cyber Capabilities (related to military)	Meta has no military	Meta’s cyber capabilities not related to military	Uncalculated
Government effectiveness	Meta has no government	Meta’s organizational structure	16 th at best
Diversity of Export Products	Focused on tangible products, not digital	Meta’s digital products exported	Uncalculated

Population Relative to Neighbors	Meta is non-location bound – no neighbors, and has no population	Meta employees or Meta users	1 st at best
Landmass Deterrent	Meta is not a country and has no land where population resides	Count no land as a benefit	Uncalculated
Total Population	Meta has no land where population resides	Meta employees or Meta Users	1 st at best
Regional Embassies, Global Embassies, Second-tier diplomatic network	Meta isn't a country and has no embassies, commissions, permanent missions or consulates	Meta Headquarters and international offices	18 th place for Global Embassies or 3 rd place in the Second-tier Diplomatic Network
Summits, Clubs and Organizations	These items were state-centric	Allow non-state items to count	Uncalculated
Regional Political Leadership, Global Political Leadership, Strategic Ambition	Meta is not led by a political leader	Substitute Mark Zuckerberg as Meta's political leader	Uncalculated
Vaccine Donations	Meta didn't donate vaccines	Money donated by Meta toward Covid-19	5 th
Radio Broadcasters	Meta doesn't have a public radio	Meta's online Facebook Live Audio	3 rd

Null vs Earned Zeros

The following table details the type of zero—null or earned zero (see discussion in Chapter 5)—assigned to Meta Platforms for the indicators applied from the Lowy Institute's Asia Power Index.

Table A.3 Null Vs Earned Zeros Assigned to Meta Platforms for Asia Power Index Indicators

Null Vs Earned Zeros Assigned to Meta Platforms for Asia Power Index Indicators		
NULL ZEROS		
These zeros are a result of an indicator not being applicable to Meta, and data not being collected on this measure, resulting in a null zero.		
Applicable to Meta?	Score	Indicator
No	Null 0	Global Reserve Currency
No	Null 0	International Currency Share
No	Null 0	Official Reserves
No	Null 0	Export Credit Agencies
No	Null 0	Sovereign wealth funds
No	Null 0	Merchant Fleet
No	Null 0	Ground forces deployment

No	Null 0	Naval deployment
No	Null 0	Government effectiveness
No	Null 0	Population relative to neighbours
No	Null 0	Demographic deterrent
No	Null 0	Global FTAs
No	Null 0	Regional FTAs
No	Null 0	Foreign assistance (global)
No	Null 0	Foreign assistance (regional)
No	Null 0	Regional military alliances
No	Null 0	Allied foreign forces
No	Null 0	Joint training (allies)
No	Null 0	Combined operation years (allies)
No	Null 0	Arms procurements (allies)
No	Null 0	Alliance force multiplier
No	Null 0	Defence dialogues
No	Null 0	Defence consultation pacts
No	Null 0	Foreign forces and deployments
No	Null 0	Joint training (non-allies)
No	Null 0	Combined operation years (non-allies)
No	Null 0	Arms procurements (non-allies)
No	Null 0	Embassies (regional)
No	Null 0	Embassies (global)
No	Null 0	Second-tier diplomatic network (regional)
No	Null 0	Summits, clubs and organisations
No	Null 0	Institutional voting shares
No	Null 0	UN capital contributions
No	Null 0	Voting alignment
No	Null 0	Voting partners
No	Null 0	Political leadership (regional)
No	Null 0	Political leaderships (global)
No	Null 0	Strategic ambition
No	Null 0	Diplomatic service
No	Null 0	Covid-19 response
No	Null 0	Vaccine donations
No	Null 0	Vaccine donations (per capita)
No	Null 0	Status: Visa-free travel
No	Null 0	Cultural heritage
No	Null 0	Asia-Pacific international students
No	Null 0	Diaspora influence

No	Null 0	Migrant drawing power
No	Null 0	Regional travel destination
No	Null 0	Regional travel connectivity
EARNED ZEROS		
These zeros are a result of poor performance on a measure.		
Applicable to Meta?	Score	Indicator
Yes	0	Global Imports
Yes	0	Global Investment Inflows (%)
Yes	0	Military expenditure, market exchange rates
Yes	0	Military expenditure, defence sector PPP
Yes	0	Military and paramilitary forces
Yes	0	Organisation: Combat Experience
Yes	0	Organisation: Command and control
Yes	0	Climate change resilience
Yes	0	Energy trade balance
Yes	0	Energy self-sufficiency
Yes	0	Fuel trade balance
Yes	0	Rare-earth metals supply
Yes	0	Diversity of export products
Yes	0	Diversity of export markets
Yes	0	Landmass deterrent
Yes	0	Nuclear weapons capability
Yes	0	Nuclear weapons range
Yes	0	Ground-based nuclear missile launchers
Yes	0	Nuclear second-strike capability
Yes	0	Military expenditure forecast 2030
Yes	0	Military capability enhancement 2022-30
Yes	0	Primary trade partner
Yes	0	Regional selling power
Yes	0	Regional buying power
Yes	0	Foreign investment in region
Yes	0	Primary foreign investor
Yes	0	Average share of foreign investment
Yes	0	Investment attractiveness
Yes	0	Global arms trade
Yes	0	Arms export partnerships
Yes	0	Cultural exports

Yes	0	Prestige: Skyscrapers
Yes	0	Regional influence: Newspapers
Yes	0	Regional influence: TV broadcasters
Yes	0	Regional influence: Radio broadcasters

Lowy Institute Asia Power Index Indicator and Sub-Measure, and Measure Definitions

The following table lists the definitions of measures, sub-measures and indicators from the Lowy Institute's Asia Power Index.

Table A.4 Lowy Asia Power Index Definitions for Measures, Sub-Measures, and Indicators

Lowy Asia Power Index Definitions for Measures, Sub-Measures, and Indicators	
Measure, Sub-measure, or indicator	Definition
(Measure) Economic Capability:	Core economic strength and the attributes of an economy with the most geopolitical relevance; measured in terms of GDP at purchasing power parity, international leverage, technological sophistication and global connectivity.
(Sub-Measure) Size:	The economic weight of a country as reflected by its GDP, which is the total value of all final goods and services produced annually within an economy. Purchasing power parity exchange rates are used to allow for a reliable comparison of real levels of production between countries.
(Indicator) GDP	Estimated GDP at purchasing power parity, current prices (2021); IMF
(Sub-Measure) International leverage	Resources that give governments enhanced financial, legal and sanctioning powers abroad. These include global corporations and internationalised currencies, as well as sovereign wealth funds, export credit agencies and official reserves.
(Indicator) Corporate Giants	Number of public companies listed in the Forbes 2000 (2021); Forbes 2000
(Indicator) Global Reserve Currency	Currency composition of official foreign exchange reserves, annualised average (2020); IMF
(Indicator) International Currency Share	Share of international financial transactions undertaken in national currency, annualised average (2020); Society for Worldwide Interbank Financial Telecommunication (SWIFT)
(Indicator) Official Reserves	Official reserve assets including gold, current dollars (2019); World Bank; Reuters; Central Bank of Taiwan
(Indicator) Export Credit Agencies	Export credit agencies, total assets, current dollars (2019); Lowy Institute
(Indicator) Sovereign wealth funds	Sovereign wealth funds, total assets, current dollars (2021); Lowy Institute; Sovereign Wealth Fund Institute
(Sub-Measure) Technology	The technological and scientific sophistication of countries. This is measured through indicators such as labour productivity, high-tech exports, supercomputers, renewable energy generation and input variables including R&D spending.

(Indicator) High-tech exports	Estimated technological sophistication of exports EXPY, 0–100 (2019); World Bank World Integrated Trade Solutions (WITS) database; Lowy Institute
(Indicator) Productivity	GDP output per worker, constant 2010 dollars (2020); International Labour Organization
(Indicator) Human resources in R&D	Total R&D researchers, full-time equivalent (latest year available); UNESCO; Taiwan Statistical Data Book; Lowy Institute
(Indicator) R&D spending (% of GDP)	Gross domestic expenditure on R&D as a share of GDP (latest year available); UNESCO; Taiwan Statistical Data Book; Lowy Institute
(Indicator) Nobel prizes (sciences)	High achievements in physics, chemistry, and physiology or medicine (1990–2020); NobelPrize.org
(Indicator) Supercomputers	Number of supercomputers in the global top 500 (2020); Top 500.org
(Indicator) Satellites Launched	Satellites launched by country of ownership or operation (2017–20); Union of Concerned Scientists Satellite Database
(Indicator) Renewable Energy	Annual electricity generation from renewables, gigawatt hours (2019); International Energy Agency; Lowy Institute
(Sub-Measure) Connectivity	The capital flows and physical means by which countries connect to and shape the global economy, including through international trade, global inward and outward investment flows, merchant fleets and international aviation hubs.
(Indicator) Global Exports	Exports of goods and services, current dollars (2020); World Bank; UN Comtrade; Observatory of Economic Complexity
(Indicator) Global Imports	Imports of goods and services, current dollars (2020); World Bank; UN Comtrade; Observatory of Economic Complexity
(Indicator) Global Investment Outflows (%)	Three-year cumulative flows of outward foreign capital investment (2018–2020); FDI Markets; Lowy Institute
(Indicator) Global Investment Inflows (%)	Three-year cumulative flows of inward foreign capital investment (2018–2020); FDI Markets; Lowy Institute
(Indicator) Merchant Fleet	Total fleet, dead-weight tons (2020); UN Conference on Trade and Development
(Indicator) Travel Hubs	Direct international routes from principal airport hub (2021); Lowy Institute; FlightsFrom.com
(Measure) Military Capability	Conventional military strength; measured in terms of defence spending, armed forces and organisation, weapons and platforms, signature capabilities and Asian military posture.
(Sub-measure) Defence spending	Annual spending on military forces and activities. This sub-measure looks at current resources devoted to maintaining, renewing, replacing and expanding military capability, measured in terms of military expenditure at market exchange rates and estimated defence-sector PPP rates.
(Indicator) Military expenditure, market exchange rates	Estimated military expenditure, current dollars (2021); Lowy Institute; US Bureau of Arms Control, Verification and Compliance
(Indicator) Military expenditure, defence sector PPP	Estimated military expenditure at defence sector purchasing power parity, current prices (2021); Lowy Institute; US Bureau of Arms Control, Verification and Compliance
(Sub-Measure) Armed forces	Total active military and paramilitary forces, readiness and organisation. This sub-measure is principally focused on the size of armed forces, but also takes account of their combat experience, training and preparedness, as well as command and control structures.
(Indicator) Military and paramilitary forces	Active military and paramilitary personnel (2021); IISS Military Balance 2021

(Indicator) Training, readiness and sustainment	Expert survey: Training and preparedness for sustained operations in the event of interstate conflict, two-year rolling average, 0–100 (2020–21); Lowy Institute
(Indicator) Organisation: Combat Experience	Expert survey: Combat experience relevant to the ability of armed forces to engage in interstate conflict, two- year rolling average, 0–100 (2020–2021); Lowy Institute
(Indicator) Organisation: Command and control	Expert survey: Exercise of authority and direction over armed forces in the event of an interstate conflict, two-year rolling average, 0–100 (2020–2021); Lowy Institute
(Sub-Measure)	Weapons and platforms: A country’s stock of land, maritime and air warfare assets and capabilities. This sub-measure consists of a number of proxy indicators for capability across the three domains and assesses the sophistication of weapons and platforms.
(Indicator) Land warfare: Manoeuvre	Proxy: Main battle tanks and infantry fighting vehicles (2021); IISS Military Balance 2021
(Indicator) Land warfare: Firepower	Proxy: Attack helicopters, used in close air support for ground troops (2021); IISS Military Balance 2021
(Indicator) Maritime warfare: Sea control	Proxy: Principal surface combatants — frigates, destroyers, cruisers and carriers (2021); IISS Military Balance 2021
(Indicator) Maritime warfare: Fire Power	Proxy: Missile vertical launching cells on board surface combatants and submarines (2021); IISS Military Balance 2021
(Indicator) Maritime warfare: Sea denial	Proxy: Tactical submarines (2021); IISS Military Balance 2021
(Indicator) Air warfare: Fighters	Fighter/ground attack aircraft (2021); IISS Military Balance 2021
(Indicator) Air warfare: Enablers	Proxy: Transport aircraft, airborne early warning and control (AEW&C) aircraft, and intelligence, surveillance and reconnaissance (ISR) aircraft (2021); IISS Military Balance 2021
(Indicator) Technology, maintenance and range	Expert survey: Technology, maintenance and range of weapons systems, equipment and materiel, two-year rolling average, 0–100 (2020–2021); Lowy Institute
(Sub-Measure) Signature capabilities	Military capabilities that confer significant or asymmetric tactical and strategic advantages in warfare. These include ballistic missile capabilities, long-range maritime force projection, intelligence networks, and defensive and offensive cyber capabilities.
(Indicator) Ground-based missile launchers	Launching platforms for intercontinental ballistic missiles (ICBM), intermediate-range ballistic missiles (IRBM), medium-range ballistic missiles (MRBM), short-range ballistic missiles (SRBM), and ground-launched cruise missiles (GLCM) (2021); IISS Military Balance 2021
(Indicator) Ballistic missile submarines	Ballistic missile submarines (2021); IISS Military Balance 2021
(Indicator) Long-range maritime force projections	Proxy: Carriers and principal amphibious ships (2021); IISS Military Balance 2021
(Indicator) Area denial capabilities	Expert survey: Air defence, anti-naval, and intelligence, surveillance, reconnaissance and targeting capabilities, two-year rolling average, 0–100 (2020–2021); Lowy Institute
(Indicator) Intelligence capabilities	Expert survey: Institutional know-how, overseas reach, personnel and technological sophistication of intelligence agencies, two-year rolling average, 0–100 (2020–2021); Lowy Institute
(Indicator) Cyber capabilities	Expert survey: Defensive and offensive cyber capabilities, two-year rolling average, 0–100 (2020–2021); Lowy Institute
(Sub-Measure) Asian military posture	The ability of armed forces to deploy rapidly and for a sustained period in the event of an interstate conflict in Asia. This sub-measure consists of qualitative expert-based judgements of a country’s ability to engage in either a maritime or continental military confrontation in the region.

(Indicator) Ground forces deployment	Expert survey: Ability of ground forces to deploy with speed and for a sustained period in the event of a major continental military confrontation in the Asia-Pacific region, two-year rolling average, 0–100 (2020–2021); Lowy Institute
(Indicator) Naval deployment	Expert survey: Ability of the navy to deploy with speed and for a sustained period in the event of a major maritime military confrontation in the Asia-Pacific region, two-year rolling average, 0–100 (2020–2021); Lowy Institute
(Measure) Resilience	The capacity to deter real or potential external threats to state stability; measured in terms of internal institutional stability, resource security, geoeconomic security, geopolitical security and nuclear deterrence
(Sub-Measure) Internal stability	Institutional and environmental factors that enhance domestic governance and provide protection from external interference in internal affairs. This sub-measure includes indicators assessing government effectiveness, political stability, climate change resilience, the absence of internal conflict and the ability of governments to procure and administer Covid-19 vaccinations.
(Indicator) Government effectiveness	Government effectiveness: Worldwide Governance Indicators; per centile rank, 0–100 (2020); Worldwide Governance Indicators
(Indicator) Political stability	Political stability and absence of violence/terrorism: Worldwide Governance Indicators; percentile rank, 0–100 (2020); Worldwide Governance Indicators
(Indicator) Climate change resilience	Resilience to threats relating to food risk, water risk, temperature anomalies and natural disasters; global rankings (2021); Ecological Threat Register Internal
(Indicator) Internal conflict years	Number of years since 1946 in which at least one internal armed conflict resulted in 25 or more battle-related deaths (1946–2019); Uppsala Conflict Data Program
(Indicator) High-intensity internal conflict years	Number of years since 1946 in which at least one internal armed conflict resulted in 1,000 or more battle-related deaths (1946–2019); Uppsala Conflict Data Program
(Indicator) Infant mortality	Number of infants dying before reaching one year of age, per thousand live births (2019); World Bank; CIA World Factbook
(Indicator) Covid-19 vaccinations	Doses of Coronavirus (Covid-19) vaccines administered per hundred people (most recently available data as of 31 October 2021); Our World in Data
(Sub-Measure) Resource security	Secure access to energy and other critical resources essential to the functioning of a country's economy. This sub-measure looks at dependency on energy imports, energy self-sufficiency levels, refined fuel security and the supply of rare-earth metals.
(Indicator) Energy trade balance	Net energy exports in million tonnes of oil equivalent, Mtoe (2018); International Energy Agency; Asia Pacific Energy Research Centre
(Indicator) Energy self-sufficiency	Primary energy production as a share of total primary energy use (2019); International Energy Agency; Asia Pacific Energy Research Centre
(Indicator) Fuel trade balance	Net exports of refined petroleum, current dollars (2019); Observatory of Economic Complexity
(Indicator) Fuel security	Deficit of refined petroleum as a proportion of GDP (2019); Lowy Institute; Observatory of Economic Complexity; World Bank; IMF
(Indicator) Rare-earth metals supply	Mining production of rare-earth metals, tonnes (2020); US Geological Survey
(Sub-Measure) Geoeconomic security	: The ability to defend against other states' economic actions on a country's geopolitical interests and economic activity. This sub-

	measure looks at an economy's diversity of export markets and products, as well as its levels of dependency on primary trade partners and global trade.
(Indicator) Diversity of export products	Total products exported to at least one foreign market with a value of at least US\$10,000 (2019); World Bank World Integrated Trade Solution (WITS) database
(Indicator) Diversity of export markets	Foreign markets to which exporter ships at least one product with a value of at least US\$10,000 (2019); World Bank World Integrated Trade Solution (WITS) database
(Indicator) Dependency on global trade	Trade measured as a proportion of GDP (2020); World Bank; UN Comtrade; Bank of Korea; IMF; Observatory of Economic Complexity; Lowy Institute
(Indicator) Dependency on primary trade partner	Two-way trade with primary trade partner as a share of total trade (2020); IMF Direction of Trade Statistics
(Sub-Measure) Geopolitical security	Structural and political factors that minimise the risk of interstate conflict and enhance a country's territorial security. This sub-measure includes indicators such as population size relative to neighbours and geographic deterrence based on landmass, as well as active border disputes and legacies of interstate conflicts with neighbours.
(Indicator) Population relative to neighbours	Population as a share of neighbouring country populations: weighted at 100% for neighbouring countries with land borders; 75% for neighbouring countries divided by a strait; 25% for neighbouring countries with touching or overlapping claimed EEZ boundaries (2019); Lowy Institute
(Indicator) Landmass deterrent	Country landmass, square kilometres (2020); World Bank; Taiwan Statistical Data Book
(Indicator) Demographic deterrent	Total population (2019); World Bank; Taiwan Statistical Data Book
(Indicator) Interstate conflict legacies	Years of interstate conflict with neighbouring Index countries as a primary party (1948–2021); Uppsala Conflict Data Program; Lowy Institute
(Indicator) Boundary disputes	Overlapping territorial claims and/or unresolved land border and maritime demarcations (2020); Lowy Institute
(Sub-Measure) Nuclear deterrence	Strategic, theatre and tactical nuclear forces that can be used to deter potential aggressors by threatening a retaliatory nuclear strike. This sub-measure assesses nuclear weapons range, ground-based nuclear missile launchers and nuclear second-strike capabilities.
(Indicator) Nuclear weapons capability	States with nuclear weapons (2021); Lowy Institute
(Indicator) Nuclear weapons range	Maximum estimated nuclear missile range, kilometres (2021); CSIS Missile Defense Project; Lowy Institute
(Indicator) Ground-based nuclear missile launchers	Launching platforms for intercontinental ballistic missiles (ICBM), intermediate-range ballistic missiles (IRBM), medium-range ballistic missiles (MRBM), short-range ballistic missiles (SRBM), and ground-launched cruise missiles (GLCM) containing nuclear warheads (2021); IISS Military Balance 2021
(Indicator) Nuclear second-strike capability	Proxy: Ballistic missile submarines (2021); IISS Military Balance 2021
(Measure) Future Resources	The projected distribution of future resources and capabilities, which play into perceptions of power today; measured in terms of estimated economic, defence and broad resources in 2030, as well as working-age population and labour dividend forecasts for 2050
(Sub-Measure) Economic resources 2030	Future economic size and capabilities. This is measured by forecast GDP at purchasing power parity in 2030 and the Beckley formula

	for estimating economic power; multiplying forecast GDP by forecast GDP per capita.
(Indicator) GDP baseline	Estimated GDP at purchasing power parity, current prices (2021); Lowy Institute; IMF
(Indicator) GDP forecast 2030	GDP forecast at purchasing power parity, constant 2021 prices (2030); Lowy Institute
(Indicator) Economic capability 2030	Beckley formula: GDP by GDP per capita forecast at purchasing power parity, 0–100 (2030); Lowy Institute
(Sub-Measure) Defence resources 2030	Future defence spending and military capability enhancements. This sub-measure consists of two indicators. The first looks at forecasts of absolute levels of military expenditure in 2030, holding the current ratio of defence spending to GDP constant. The second looks at expected gains in military expenditure as a proxy for investments in military capability above replacement levels.
(Indicator) Military expenditure baseline	Estimated military expenditure at defence sector purchasing power parity, current prices (2021); Lowy Institute; US Bureau of Arms Control, Verification and Compliance
(Indicator) Military expenditure forecast 2030	Estimated military expenditure forecast at defence sector purchasing power parity, constant 2021 prices (2030); Lowy Institute
(Indicator) Military capability enhancement 2022-30	Forecast absolute increase in military expenditure above existing levels at estimated defence sector purchasing power parity, constant 2021 prices (2022–30); Lowy Institute
(Sub-Measure) Broad resources 2030	Estimated score for a country's broad resources and capabilities in 2030. This sub-measure estimates broad resources in 2030, based on every country's current ratio of GDP and military expenditure to their aggregate score for economic resources, military capability and resilience.
(Indicator) Estimated broad resources 2030	Estimated aggregate score for economic resources, military capability and resilience measures based on GDP and military expenditure trends, 0–100 (2030); Lowy Institute
(Sub-Measure) Demographic resources 2050	Demographic variables that are expected to contribute to future GDP beyond 2030. This sub-measure consists of a forecast of the working-age population (15–64) in 2050 as well as the expected labour dividend from gains in the working-age population adjusted for quality of the workforce and climate change resilience.
(Indicator) Working-age population baseline	Total working-age population, 15–64 (2020); UN Population Division; Lowy Institute
(Indicator) Working-age population forecast 2050	Medium variant forecast for total working-age population, 15–64 (2050); UN Population Division; Lowy Institute
(Indicator) Labour dividend 2020-50	Forecast gains in working-age population, adjusted for quality of the workforce and climate change resilience (2020–50); quality is proxied by GDP per worker in 2019 at purchasing power parity; Lowy Institute
(Measure) Economic Relationships	The capacity to exercise influence and leverage through economic interdependencies; measured in terms of trade relations, investment ties and economic diplomacy
(Sub-Measure) Regional trade relations	The ability to influence other countries through bilateral trade flows and relative dependencies. This sub-measure focuses on an economy's relative importance as an importer, exporter and primary trade partner for other countries, based on annual bilateral trade flows.
(Indicator) Trade with region	Total value of trade with Index countries, current dollars (2020); IMF Direction of Trade Statistics; Lowy Institute

(Indicator) Primary trade partner	Number of Index countries in which state is the primary regional trading partner (2020); IMF Direction of Trade Statistics; Lowy Institute
(Indicator) Regional selling power	Average imports share in 25 Index countries (2020); IMF Direction of Trade Statistics; Lowy Institute
(Indicator) Regional buying power	Average exports share in 25 Index countries (2020); IMF Direction of Trade Statistics; Lowy Institute Foreign
(Sub-Measure) Regional investment ties	The ability to influence other countries through foreign direct investment flows and relative dependencies. This sub-measure focuses on an economy's relative importance as a source and destination of foreign investment for other countries, based on ten-year cumulative flows of foreign capital investment.
(Indicator) Foreign investment in region	Ten-year cumulative flows of outward foreign capital investment in Index countries (2011–20); FDI Markets; Lowy Institute
(Indicator) Primary foreign investor	Index countries in which state is the primary regional inward foreign direct investor, based on ten-year cumulative flows of foreign capital investment (2011–20); FDI Markets; Lowy Institute
(Indicator) Average share of foreign investment	Average share of inward foreign direct investment in 25 Index countries, based on ten-year cumulative flows of foreign capital investment (2011–20); FDI Markets; Lowy Institute
(Indicator) Investment attractiveness	Ten-year cumulative flows of inward foreign capital investment (2011–20); FDI Markets; Lowy Institute
(Sub-Measure) Economic diplomacy	The use of economic instruments to pursue collaborative interests and beneficial geopolitical outcomes. This sub-measure tracks economic diplomacy through free trade agreements and outward foreign assistance flows.
(Indicator) Global FTAs	Bilateral and multilateral free trade agreements concluded by Index countries with other countries (2021); World Trade Organization; Lowy Institute
(Indicator) Regional FTAs	Bilateral and multilateral free trade agreements concluded with Index countries (2021); World Trade Organization; Lowy Institute
(Indicator) Foreign assistance (global)	Annual overseas development assistance (ODA) and other official flows (OOF), current dollars (2019); OECD; AidData
(Indicator) Foreign assistance (regional)	Annual overseas development assistance (ODA) and other official flows (OOF) to Asia, current dollars (2019); OECD; AidData
(Measure) Defense Networks	Defence partnerships that act as force multipliers of autonomous military capability; measured through assessments of alliances, regional defence diplomacy and arms transfers.
(Sub-Measure) Regional alliance network	Number, depth and combined strength of defence alliances in the region. This is measured in terms of codified security guarantees, military personnel deployed in Index countries, joint military training exercises, arms procurements from allied partners and combined operation years with allies.
(Indicator) Regional military alliances	Number of codified alliances between Index countries, including a mutual defence clause or actionable security guarantee (2021); Lowy Institute; Alliance Treaty Obligations and Provisions Project
(Indicator) Allied foreign forces	Allied military personnel deployed in Index countries: minimum of 50 personnel deployed on a permanent or semi-permanent rotational basis (2021); Lowy Institute; IISS Military Balance 2021
(Indicator) Joint training (allies)	Number of joint training exercises conducted with allied Index countries (2016–2020); Lowy Institute
(Indicator) Combined operation years (allies)	Cumulative years fought alongside allied Index countries in individual conflicts, as a primary or supporting party (1948–2019); Uppsala Conflict Data Program

(Indicator) Arms procurements (allies)	Arms imports from allied Index countries expressed in SIPRI Trend Indicator Values (2015–20); SIPRI Arms Transfer Database
(Indicator) Alliance force multiplier	Ratio of combined allied military capabilities to autonomous military capability (2021); Lowy Institute
(Sub-Measure) Regional defence diplomacy	Diversity and depth of defence diplomacy in the region. This sub-measure assesses defence dialogues, defence consultation pacts, foreign deployments between non-allied defence partners, joint military training exercises, combined operation years and arms procurements from non-allied countries.
(Indicator) Defence dialogues	Number of bilateral and plurilateral defence diplomacy meetings held between Index countries (2020); Lowy Institute
(Indicator) Defence consultation pacts	Defence consultation pacts between non-allied Index countries (2021); Lowy Institute
(Indicator) Foreign forces and deployments	Military personnel deployed to and from non-allied Index countries: minimum of 50 personnel deployed on a permanent or semi-permanent rotational basis (2021); Lowy Institute; IISS Military Balance 2021
(Indicator) Joint training (non-allies)	Number of joint training exercises conducted with non-allied Index countries (2016–2020); Lowy Institute
(Indicator) Combined operation years (non-allies)	Cumulative years fought alongside non-allied Index countries in individual conflicts, as a primary or supporting party (1948–2019); Uppsala Conflict Data Program
(Indicator) Arms procurements (non-allies)	Arms imports from non-allied Index countries expressed in SIPRI trend indicator values (2015–20); SIPRI Arms Transfers Database
(Sub-Measure) Global defence partnerships	Arms trade patterns indicative of global security partnerships and collaboration across defence industries, measured in terms of annual arms trade flows and number of arms export recipients over a five-year period.
(Indicator) Global arms trade	Annual arms imports and exports, current dollars (2017); US Bureau of Arms Control, Verification and Compliance
(Indicator) Arms export partnerships	Number of arms export recipients, including state and non-state groups (2015–2020); SIPRI Arms Transfers Database
(Measure) Diplomatic Influence	The extent and standing of a state's foreign relations; measured in terms of diplomatic networks, involvement in multilateral institutions and clubs, and overall foreign policy and strategic ambition.
(Sub-Measure) Diplomatic network	The regional and global reach of a country's diplomatic offices, measured in terms of total number of embassies, high commissions, permanent missions and other representative offices.
(Indicator) Embassies (regional)	Number of embassies, high commissions and permanent missions in Index countries (2021); Lowy Institute Global Diplomacy Index
(Indicator) Embassies (global)	Number of embassies, high commissions and permanent missions globally (2021); Lowy Institute Global Diplomacy Index
(Indicator) Second-tier diplomatic network (regional)	Consulates and other representative offices in Index countries (2021); Lowy Institute Global Diplomacy Index
(Sub-Measure) Multilateral power	A country's participation and diplomatic clout in multilateral forums. This sub-measure examines membership in select summits, diplomatic clubs and intergovernmental organisations, as well as financial contributions to the United Nations and development banks, and voting alignment with other countries in UN resolutions.
(Indicator) Summits, clubs and organisations	Membership in select summits, diplomatic clubs and regional intergovernmental organisations (2021); Lowy Institute
(Indicator) Institutional voting shares	Average voting shares by subscribed capital in major multilateral development banks (2020); Lowy Institute

(Indicator) UN capital contributions	Net capital contributions to the United Nations Secretariat, share of global total (2021); UN Official Document System
(Indicator) Voting alignment	Voting alignment with other Index countries in adopted United Nations General Assembly resolutions (2020); UN Digital Library
(Indicator) Voting partners	Times country featured among top three voting partners for other Index countries in United Nations General Assembly (2020); UN Digital Library
(Sub-Measure) Foreign policy	The ability of government leaders and foreign policy bureaucracies to advance their country's diplomatic interests. This sub-measure aggregates qualitative expert-based judgements of how effectively leaders pursue their country's diplomatic interests, their demonstrated level of strategic ambition, and the wider efficacy of a country's foreign policy bureaucracy. The sub-measure includes temporary indicators measuring vaccine donations to the region and perceptions of how countries have handled the Covid-19 pandemic in 2021
(Indicator) Political leadership (regional)	Expert survey: Efficacy of political leaders in advancing their country's diplomatic interests in Asia, 0–100 (2021); Lowy Institute
(Indicator) Political leaderships (global)	Expert survey: Efficacy of political leaders in advancing their country's diplomatic interests globally, 0–100 (2021); Lowy Institute
(Indicator) Strategic ambition	Expert survey: Extent to which political leaders demonstrate strategic ambition, two-year rolling average, 0–100 (2020–21); Lowy Institute
(Indicator) Diplomatic service	Expert survey: Efficacy of country's diplomatic service and wider foreign policy bureaucracy, two-year rolling average, 0–100 (2020–21); Lowy Institute
(Indicator) Covid-19 response	Expert survey: Perception of international and domestic handling of Covid-19 pandemic (2021); Lowy Institute
(Indicator) Vaccine donations	Doses of Coronavirus (Covid-19) vaccines donated and delivered to the region (October 2021); Think Global Health, Council of Foreign Relations; Lowy Institute
(Indicator) Vaccine donations (per capita)	Doses of Coronavirus (Covid-19) vaccines donated and delivered to the region per capita of the donor country (October 2021); Think Global Health, Council of Foreign Relations; Lowy Institute; World
(Measure) Cultural Influence	The ability to shape international public opinion through cultural appeal and interaction; measured in terms of cultural projection, information flows and people exchanges.
(Sub-Measure) Cultural projection	Cultural influences and exports that help to enhance a country's reputation abroad. This sub-measure looks at online search trends in the region, exports of cultural services, global brands, and the international status of a country's passports, cities and heritage sites.
(Indicator) Online search interest	Online interest for a given Index country in 24 other Index countries; average per cent of total Google and Baidu searches for selected countries (2020); Lowy Institute; Google trends; Baidu
(Indicator) Cultural exports	Exports of cultural services, current dollars (2020); UN Conference on Trade and Development; UNESCO
(Indicator) Global brands	Number of brands in the Global 500 (2021); Brand Directory
(Indicator) Prestige: Skyscrapers	Buildings in financial capital above 150 metres in height (2020); Council on Tall Buildings and Urban Habitat
(Indicator) Status: Visa-free travel	Number of countries that citizens can travel to visa-free (2021); Henley & Partners

(Indicator) Cultural heritage	UNESCO World Heritage listed sites (2020); UNESCO
(Sub-Measure) Information flows	The regional appeal of a country's media outlets and universities. This sub-measure looks at the online search trends in the region for selected national news agencies, newspapers, television and radio broadcasters, as well as the number of inbound international students from the region enrolled in tertiary education.
(Indicator) Asia-Pacific international students	Pre-pandemic international students enrolled in tertiary education from East, South, West and Central Asia and the Pacific (2018/19); UNESCO; ICEF Monitor; Institute of International Education; Lowy Institute
(Indicator) Regional influence: News Agencies	Online interest for a given Index country's news agency in 23 other Index countries; average per cent of total online searches for selected news agencies (2020); Lowy Institute; Google Trends
(Indicator) Regional influence: Newspapers	Online interest for a given Index country's national newspaper in 24 other Index countries; average per cent of total online searches for selected newspapers (2020); Lowy Institute; Google Trends
(Indicator) Regional influence: TV broadcasters	Online interest for a given index country's international television broadcaster(s) in 24 other Index countries; average per cent of total online searches for selected television broadcasters (2020); Lowy Institute; Google Trends
(Indicator) Regional influence: Radio broadcasters	Online interest for a given Index country's public radio broadcaster(s) in 24 other Index countries; average per cent of total online searches for selected radio broadcasters (2020); Lowy Institute; Google Trends
(Sub-Measure) People exchanges	The depth and influence of a country's people-to-people links in the region. This sub-measure tracks the size of regional diasporas, and the attractiveness of countries as travel and emigration destinations
(Indicator) Diaspora influence	Average share of total immigrant populations resident in 25 Index countries from the given Index country of origin (2020); Lowy Institute; UN Department of Economic and Social Affairs; Taiwan Overseas Community Affairs Council
(Indicator) Migrant drawing power	Average share of global migrant populations from 25 Index countries of origin settled in the given Index country (2020); Lowy Institute; UN Department of Economic and Social Affairs;
(Indicator) Regional travel destination	Pre-pandemic arrivals of non-resident visitors from Index countries at national borders (2019); UN World Tourism Organization; Reuters
(Indicator) Regional travel connectivity	Direct international flight routes from principal airport hubs of Index countries (2021); Lowy Institute; FlightsFrom.com

The New Non-State Agent and Nation-State Power Index

The following includes documentation of indicators that were adapted from the Asia Power Index for use on the New Non-State Agent and Nation-State Power Index.

Indicators Inclusive of Non-State Agents

There were 22 out of 181 indicators (12.15 percent) from the Asia Power Index which were suitable for non-state agents, such as Meta Platforms, and states alike. These indicators were not altered and were used on the New Non-State Agent and Nation-State Power Index. The following is a list of those indicators:

Table A.5 Asia Power Index Indicators Used on the New Non-Nation-State and Nation State Power Index As-Is

Asia Power Index Indicators Used on the New Non-Nation-State and Nation State Power Index As-Is	
Corporate Giants	Energy self-sufficiency
Productivity	Fuel trade balance
Human resources in R&D	Fuel security
R&D spending (percent of GDP)	Rare-earth metals supply
Satellites Launched	Landmass deterrent
Renewable Energy	Boundary disputes
Military and paramilitary forces	Primary trade partner
Training, readiness and sustainment	Global arms trade
Intelligence capabilities	Online search interest
Climate change resilience	Global brands
Energy trade balance	

Indicators Altered to Include Non-State Agents

There were 60 out of 181 indicators (31.14 percent) from the Asia Power Index that were altered and used for the Non-State Agent and Nation-State Power Index. These indicators were either changed slightly in definition, measurement indicator, or object measured, or merged with other indicators.

Table A.6 Altered or Merged Indicators used on the Non-State Agent and Nation-State Power Index

Altered or Merged Indicators used on the Non-State Agent and Nation-State Power Index	
Original Indicator	Altered or Merged Result
GDP	GDP or Revenue
High-tech exports	High-tech Exports

Nobel prizes (sciences)	Scientific Prizes, Awards (Nobel, Turing...)
Supercomputers	Supercomputers - quantity & Quality
Global Exports	Global Exports Or International revenue as % of total revenue
Global Investment Outflows (%)	Global Investment Outflows (%) OR Int'l Investments Globally
Global Investment Inflows (%)	Global Investment Inflows (%) OR Int'l Investment in companies owned
Military expenditure, market exchange rates	Military Expenditure or Physical Security Expenditure
Organisation: Combat Experience	Organisation: Combat Experience Or Experience with threats (nonphysical or physical) and hacking
Organisation: Command and control	Command and Control: exercise of authority during threat
Land warfare: Manoeuvre	Military Assets: Land warfare: Manoeuvre, Land warfare: Firepower, Maritime warfare: Sea control, Maritime warfare: Fire Power, Maritime warfare: Sea denial, Air warfare: Fighters, Air warfare: Enablers, Technology, maintenance and range, Ground-based missile launchers, Ballistic missile submarines, Long-range maritime force projections, Area denial capabilities, Intelligence capabilities (Merged with following 11 indicators below)
Land warfare: Firepower	Merged
Maritime warfare: Sea control	Merged
Maritime warfare: Fire Power	Merged
Maritime warfare: Sea denial	Merged
Air warfare: Fighters	Merged
Air warfare: Enablers	Merged
Technology, maintenance and range	Merged
Ground-based missile launchers	Merged
Ballistic missile submarines	Merged
Long-range maritime force projections	Merged
Area denial capabilities	Merged
Government effectiveness	Government or organization effectiveness
Political stability	Political or Organizational Stability
Internal conflict years	Internal conflict years: not just battle-related deaths. Maybe loss of funds, employees, followers
Infant mortality	Standard of living for population/employee/followers
Covid-19 vaccinations	Health of population/employees/followers
Diversity of export products	Diversity of export products: total products exported to foreign market (Not using WITS database only, but allowing for digital products too)
Diversity of export markets	Diversity of export markets: total markets exported to foreign market (Not using WITS database only, but allowing for digital products too)
Dependency on global trade	Dependency on global trade: Trade as portion of GDP Or Revenue
Demographic deterrent	Demographic deterrent: Alter: Population, users, followers, employees
Interstate conflict legacies	Interstate conflict legacies: Alter: Years of interstate conflict / years of conflict with other non-state
Nuclear weapons capability	Nuclear weapons capability, range, launchers, 2nd strike capability (Merged with 3 indicators below)

Nuclear weapons range	Merged
Ground-based nuclear missile launchers	Merged
Nuclear second-strike capability	Merged
GDP forecast 2030	GDP forecast 2030: Alter: based on revenue or GDP
Economic capability 2030	Economic capability 2030: Alter: based on revenue or GDP
Working-age population forecast 2050	Working-age population forecast 2050: Alter: Total working age population can count as employees, followers
Labour dividend 2020-50	Labour dividend 2020-50: Alter: Total working age population can count as employees, followers
Trade with region	Trade with region: Alter: Revenue from int'l countries as well as trade
Global FTAs	Economic Agreements/Instruments: Global FTAs, Regional FTAs, Foreign assistance (global), Foreign assistance (regional), including International Agreements and Treaties for non-states (merged with following 3 indicators below)
Regional FTAs	Merged
Foreign assistance (global)	Merged
Foreign assistance (regional)	Merged
Regional military alliances	Merged to "support from other country's defense" (with below)
Allied foreign forces	Merged
Joint training (allies)	Merged
Combined operation years (allies)	Merged
Arms procurements (allies)	Merged
Embassies (regional)	Embassies & Offices. The regional and global reach of a country or businesses diplomatic or business offices. Look at not how many embassies, consulates/offices, but how many countries embassies, consulates/offices are in.
Summits, clubs and organisations	Membership in select summits, diplomatic clubs and regional intergovernmental organisations (including those that fit non-states too)
Political leadership (regional)	Efficacy of political or business leaders in advancing their country's or business's diplomatic interests regionally & globally (merged with below)
Political leaderships (global)	Merged
Strategic ambition	Extent to which political or business leaders demonstrate strategic ambition
Regional influence: News Agencies	Online interest for a given business or country's news agency
Regional influence: Newspapers	Online interest for a given business's or country's newspaper or magazine
Regional influence: TV broadcasters	Online interest for a given business country's international television broadcaster(s) (online or cable/satellite)
Regional influence: Radio broadcasters	Online interest for a given business or country's radio broadcaster(s) (online or am/FM)
Diaspora influence	Average share of total immigrant populations (or users, or followers) resident in other countries

Indicators That Were Removed

There were 49 out of 181 indicators (27.07 percent) from the Asia Power Index that were not included in the Non-State Agent and Nation-State Power Index.

Table A.7 Asia Power Index Indices That Were Not Included in the New Non-Nation-State and Nation State Power Index

Asia Power Index Indices That Were Not Included In The New Non-Nation-State And Nation State Power Index	
Global Reserve Currency	Defense consultation pacts
International Currency Share	Foreign forces and deployments
Official Reserves	Joint training (non-allies)
Export Credit Agencies	Combined operation years (non-allies)
Sovereign wealth funds	Arms procurements (non-allies)
Global Imports	Arms export partnerships
Merchant Fleet	Embassies (global)
Travel Hubs	Second-tier diplomatic network (regional)
Military expenditure, defense sector PPP	Institutional voting shares
Ground forces deployment	UN capital contributions
Naval deployment	Voting alignment
High-intensity internal conflict years	Voting partners
Dependency on primary trade partner	Diplomatic service
Population relative to neighbors	Covid-19 response
Military expenditure forecast 2030	Vaccine donations
Military capability enhancement 2022-30	Vaccine donations (per capita)
Estimated broad resources 2030	Cultural exports
Regional selling power	Prestige: Skyscrapers
Regional buying power	Status: Visa-free travel
Foreign investment in region	Cultural heritage
Primary foreign investor	Asia-Pacific international students
Average share of foreign investment	Migrant drawing power
Investment attractiveness	Regional travel destination
Alliance force multiplier	Regional travel connectivity
Defense dialogues	

Missing indices which were added to the Non-State Agent and Nation-State

Power Index

The following 30 indicators were not on the Asia Power Index and were added to the Non-State Agent and Nation-State Power Index (Definitions in table A.16):

Table A.8 Indicators That Were Added To the New Non-Nation-State And Nation-State Power Index

Indicators That Were Added To The New Non-Nation-State And Nation-State Power Index
Assets, Reserves, and Wealth Funds: Including: Global Reserve Currency, International Currency Share, Official Reserves, Export Credit Agencies, Sovereign wealth funds
Debt Relative to GDP or Revenue
Capital mobility - Lowering taxes, distributing supply chains, exploiting low-cost or underdeveloped countries (Economic loopholes, avoiding taxes, avoiding environmental cleanups)
AI Capabilities
Degree of Market Monopolization
Technological advantage: state-of-the-art technology, first of its kind technology, extreme advancement in a field
Technological assets: any capital assets, patents, designs, data, equipment and computer software specifically related to space technologies
Cybersecurity Expenditures
Reputational Versatility (rebrand, adapt to new regulations/laws, survive coups)
Longevity / History : Length of entity's existence. Integration of entity in historical and societal culture
Internet Infrastructure: the physical hardware, transmission media, and software used to interconnect computers and users on the Internet (Examples: submarine cable system infrastructure, fiber optic terrestrial networks and other critical infrastructure assets)
Digital Platform Infrastructure ranking: the digital technologies that provide the foundation for an organization's information technology and operations. Mobile telecom and digital communication suites, including applications. Data centers and networks. (Examples: desktop, mobile, social and email software, CRM, Chatbots),
Lack of necessity to maintain physical infrastructure, public facilities
Non-location bound (as an advantage)
No cultural, national loyalties or obligations. Lack of accountability to population/users/followers – don't need to maintain welfare (as a benefit)
Nuclear immunity: decentralized or non-location bound
Support from other country's defense (military alliances, joint training, foreign assistance, arms weapons and technology donated, combined operations, military support)
Litigational or Regulation goals/alliances (strategic partnerships, joint alliances related to regulations and litigations)
Multilateral Forums: A country's or businesses participation and diplomatic clout in multilateral forums (example: UN participation, Institutional voting shares, UN capital contributions, Voting alignment, Voting partners, influence in trade agreements, non-state multilateral forums)
Litigation power: A country or business's money and resources for litigation, as well as settlements achieved
Evading Regulations: A country or businesses history in evading regulations imposed on them.
Incongruent relationships: A country or business's agreements, alliances, trade with partners of economic and political power
Residual or contemporary colonialism: Under state control? Level at which a business or country is under another state or business's control (example: under another state or business's control of currency, laws, market, or politics).

Deterioration of democracy – tendencies toward authoritarianism (highly centralized government or organization, political repression and little input from population, autocratic policies and processes, isolationism, social control)
Cultural and Social Influence worldwide - extent of spread of beliefs, behaviors, and practices from one business or country to another business or country
Cultural Cohesiveness / nationalism / ethnocentrism
Digital Virality Capability & Manipulation: History of instances of virality (being rapidly spread or popularized by means of people communicating with each other, especially through the internet) & relationship to or control of mode of viral instances)
Online interest for streaming video
Online information monopoly: Control, Monopoly over info/online searching, news, online platforms
Digital network: users or followers affiliated with online profiles/pages/sites/figures of country or business.

Categories Adapted for the New Non-State Agent and Nation-State Power

Index

Measures Altered or Merged

The following are measures from the Asia Power Index which were altered or merged into measures for the Non-State Agent and Nation-State Power Index. Parentheses indicate the alteration or merge on the new index.

Table A.9 Asia Power Index Measures Altered or Merged on the New Non-Nation-State and Nation-State Power Index

Asia Power Index Measures Altered or Merged on the New Non-Nation-State and Nation-State Power Index
Economic Capabilities & Economic Relationships (Merged into Economic Capabilities)
Military Capability & Defense Networks (Merged into Security & Military),
Resilience and Future Resources (Merged into Resilience & Future Resources)
Diplomatic Influences (Altered to Diplomatic Influences & Alliances)
Cultural Influence (Altered) Cultural & Social Influence

Measures Added

The following is a measure that was added to the new Non-State Agent and Nation-State Power Index, which was not on the Asia Power Index.

Table A.10 Measure added to the New Non-Nation-State and Nation-State Power Index

Measure added to the New Non-Nation-State and Nation-State Power Index
Technology

Sub-Measures

This section includes sub-measures from the Asia Power Index that were kept, removed, or added for the Non-State Agent and Nation-State Power Index.

Sub-Measures Kept

The following are sub-measures from the Asia Power Index that were kept, as is, for the Non-State Agent and Nation-State Power Index:

Table A.11 Asia Power Index Sub-Measures Kept on the New Non-Nation-State and Nation-State Power Index

Asia Power Index Sub-Measures Kept on the New Non-Nation-State and Nation-State Power Index
Under the Economic Capability Measure: Size, International Leverage, Connectivity
Under the Military Capability Measure: Defense Spending, Armed Forces, Weapons and Platforms
Under the Resilience Measure: Internal Stability, Resource Security, Geoeconomic Security, Geopolitical Security, Nuclear Deterrence,
Under the Diplomatic Influence Measure: Diplomatic Network, Multilateral Power, Foreign Policy
Under the Cultural Influence Measure: Information Flows, People Exchanges

Sub-Measures Removed

The following are sub-measures from the Asia Power Index were not used for the Non-State Agent and Nation-State Power Index:

Table A.12 Asia Power Index Sub-Measures Removed for the New Non-Nation-State and Nation-State Power Index

Asia Power Index Sub-Measures Removed for the New Non-Nation-State and Nation-State Power Index
Under the Economic Capability Measure: Technology
Under the Military Capability Measure: Signature Capabilities, Asian Military Posture

Under the Future Resources Measure: Economic Resources, Defense Resources, Broad Resources, Demographic Resources
Under the Economic Resources Measure: Regional Trade Relations, Regional Investment Ties, Economic Diplomacy
Under Defense Networks: Regional Alliance Network, Regional Defense Diplomacy, Global Defense Partnerships
Under the Cultural Influence Measure: Cultural Projection

Sub-Categories Added

The following are sub-measures that were not on the Asia Power Index, which were added for the Non-State Agent and Nation-State Power Index:

Table A.13 Asia Power Index Sub-Measures Added to the New Non-Nation-State and Nation-State Power Index

Asia Power Index Sub-Measures Added to the New Non-Nation-State and Nation-State Power Index
Under the new Technology Measure: Activities, Assets, Monopolization
Under the new Resilience & Future Resources Measure: Future Resources
Under the new Diplomatic Influences & Alliances Measure: Alliances
Under the new Cultural & Social Influence Measure: Cultural Diffusion, Online Monopolization

Changes in Weights for the New Non-State Agent and Nation-State Power Index

The following two tables show the difference in measures and weights in the Asia Power Index and the New Non-State Agent and Nation-State Power Index.

Table A.14 Changes in Measures and Weights

Changes in Measures and Weights			
Asia Power Index Measures	Weight	New - Non-State Agent & Nation-State Power Index Measures	Weight
Economic Capabilities	17.50%	Economic Capabilities	20%
Military capability	17.50%	Technology	20%
Resilience	10%	Security & Military	10%
Future resources	10%	Resilience & Future Resources	20%
Economic relationships	15%	Diplomatic Influence & Alliances	15%
Defense networks	10%	Cultural & Social Influence	15%
Diplomatic influence	10%		
Cultural influence	10%		

Table A.15 Measure & Sub-Measure Weights for the Non-State Agent and Nation-State Power Index

The following table details weights for each measure and sub-measure in the Non-State Agent and Nation-State Power Index.

Measure & Sub-Measure Weights for the Non-State Agent and Nation-State Power Index	
Measure or Sub-Measure	Weight
Economic Capabilities (Measure)	20%
Size	40%
International Leverage	40%
Connectivity	20%
Technology (Measure)	20%
Activities	20%
Assets	40%
Monopolization	40%
Security & Military (Measure)	10%
Defense Spending	35%
Armed Forces	35%
Weapons & Platforms	30%
Resilience & Future Resources (Measure)	20%
Internal Stability	20%
Resource Security	10%
Goeconomic Security	15%
Geopolitical Security	25%
Nuclear Deterrence	15%
Future Resources	15%
Diplomatic Influence & Alliances (Measure)	15%
Alliances	25%
Diplomatic Network	15%
Multilateral power	25%
Foreign policy	35%
Cultural & Social Influence (Measure)	15%
Cultural diffusion	30%
Online monopolization	35%
Information flows	30%
People Exchange	5%

Indicator Definitions for the Non-State Agent and Nation-State Power Index

A total of 30 new indicators were added to the Non-State Agent and Nation-State Power Index. The definitions for those measures are included in the following table:

Table A.16 Indicator Definitions for the Non-State Agent and Nation-State

Power Index

Indicator Definitions for the Non-State Agent and Nation-State Power Index		
Measure Level	Measure	Definition (Italics in this column indicates either a modification to the existing definition or the introduction of a new indicator beyond what is included in the Asia Power Index.)
Measure	Economic Capabilities	
Sub-Measure	Size	
Indicator	GDP or Revenue	<i>GDP for nation-states. Revenue for non-nation-states</i>
Sub-Measure	International Leverage	
Indicator	Corporate Giants	Number of public companies listed in the Forbes 2000
Indicator	Assets, Reserves, and Wealth Funds	<i>Includes: Global Reserve Currency, International Currency Share, Official Reserves, Export Credit Agencies, Sovereign Wealth Funds</i>
Indicator	Debt Relative to GDP or Revenue	<i>The amount of money borrowed to cover the outstanding balance of expenses incurred over time</i>
Indicator	Capital mobility	<i>International movement of capital for the purposes of lowering taxes, distributing supply chains, exploiting low-cost or underdeveloped countries (Economic loopholes, avoiding taxes, avoiding environmental cleanups)</i>
Sub-Measure	Connectivity	
Indicator	Global Exports Or International revenue as % of total revenue	<i>Exports of goods and services or International revenue as % of total revenue</i>
Indicator	Global Investment Outflows (%) OR Int'l Investments Globally	<i>Flows of outward foreign capital investment or international investments globally</i>
Indicator	Global Investment Inflows (%) OR Int'l Investment in companies owned	<i>Flows of inward foreign capital investment or international investment in companies owned</i>
Measure	Technology	
Sub-Measure	Activities	
Indicator	High-tech Exports	Estimated technological sophistication of exports (World Bank)
Indicator	Productivity	GDP output per worker, constant 2010 dollars
Indicator	Human resources in R&D	Total R&D researchers, full-time equivalent
Indicator	R&D spending (% of GDP)	Gross domestic expenditure on R&D as a share of GDP
Indicator	Scientific Prizes, Awards (Nobel, Turing...)	<i>Internationally recognized high achievements in science, medicine, computer science and other technology (Nobel, Turing, Edison, Webby, Software 500...)</i>
Indicator	Renewable Energy	Annual electricity generation from renewables, gigawatt hours
Sub-Measure	Assets	
Indicator	Supercomputers - quantity & Quality	<i>Number of supercomputers in the global top 500, also rank in world of fastest or largest supercomputers</i>
Indicator	Satellites Launched	<i>Satellites launched by nation-state or entity of ownership or operation</i>
Indicator	AI Capabilities	<i>Rank of most powerful supercomputer, rank of fastest supercomputer</i>

Indicator	Technological advantage	<i>Ownership of state-of-the-art technology, first of its kind technology, extreme advancement in a field</i>
Indicator	Technological assets	<i>Any capital assets, infrastructure hardware, software, networking, cloud devices, patents, designs, data, and equipment specifically related to technology</i>
Sub-Measure	Monopolization	
Indicator	Degree of Market Monopolization	<i>Exclusive possession or control of the supply of or trade in a commodity or service</i>
Indicator	Internet Infrastructure	<i>The physical hardware, transmission media, and software used to interconnect computers and users on the Internet (Examples: submarine cable system infrastructure, fiber optic terrestrial networks and other critical infrastructure assets)</i>
Indicator	Digital Platform Infrastructure ranking	<i>The digital technologies that provide the foundation for an organization's information technology and operations. Mobile telecom and digital communication suites, including applications. Data centers and networks. (Examples: desktop, mobile, social and email software, CRM, Chatbots)</i>
Measure	Security & Military	
Sub-Measure	Defense Spending	
Indicator	Military Expenditure or Physical Security Expenditure	<i>Annual expenditure allocated to maintaining, renewing, replacing and expanding military capability or physical security capability</i>
Indicator	Cybersecurity Expenditure	<i>Annual expenditure on defensive and offensive cyber capabilities</i>
Sub-Measure	Armed Forces	
Indicator	Military and paramilitary forces	<i>Active military and paramilitary personnel</i>
Indicator	Training, readiness and sustainment	<i>Training and preparedness for sustained operations in the event of interstate conflict</i>
Indicator	Organization: Combat Experience	<i>Combat experience relevant to the ability of armed forces to engage in interstate conflict</i>
Indicator	Command and Control	<i>Exercise of authority and direction over armed forces in the event of an interstate conflict</i>
Sub-Measure	Weapons and Platforms	
Indicator	Military Assets	<i>Manoeuvre warfare, land air and sea firepower, Sea control, Sea denial, air fighters, air enablers, technology, maintenance and range, Ground-based missile launchers, Ballistic missile submarines, Long-range maritime force projections, Area denial capabilities</i>
Indicator	Intelligence capabilities	<i>Institutional know-how, overseas reach, personnel and technological sophistication of intelligence agencies</i>
Indicator	Global arms trade	<i>Annual arms imports and exports</i>
Indicator	Cyber Capabilities	<i>Defensive and offensive cyber capabilities,</i>
Measure	Resilience & Future Resources	
Sub-Measure	Internal Stability	
Indicator	Government or organization effectiveness	<i>Worldwide Governance Indicators for nation-states; For organizations: perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies (WGI definition)</i>

Indicator	Political or Organizational Stability	<i>perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism (WGI definition)</i>
Indicator	Climate change resilience	Resilience to threats relating to food risk, water risk, temperature anomalies and natural disasters; global rankings
Indicator	Internal conflict years	Number of years since 1946 in which at least one internal armed conflict resulted in 25 or more battle-related deaths (1946–2020)
Indicator	Standard of living for population/employee/followers	<i>Average real gross domestic product (GDP) per capita or revenue per employee</i>
Indicator	Health of population/employees/followers	<i>Health surveys based on samples designed to represent the targeted population (use CDC measures: (see link in footnote³⁸)</i>
Indicator	Reputational Versatility	<i>Ability to or successful efforts to rebrand, ability to adapt to new regulations/laws, ability to survive coups</i>
Indicator	Longevity / History	<i>Length of entity's existence. Integration of entity in historical and societal culture</i>
Sub-Measure	Resource Security	
Indicator	Energy trade balance	Net energy exports in million tonnes of oil equivalent, Mtoe
Indicator	Energy self-sufficiency	Primary energy production as a share of total primary energy use
Indicator	Fuel trade balance	Net exports of refined petroleum, current dollars
Indicator	Fuel security	<i>Deficit of refined petroleum as a proportion of GDP or Revenue</i>
Indicator	Rare-earth metals supply	Mining production of rare-earth metals, tonnes
Indicator	Lack of necessity to maintain physical infrastructure, public facilities	<i>Lack of necessity to maintain physical infrastructure, public facilities (i.e. doesn't own land, no population)</i>
Sub-Measure	Geoeconomic Security	
Indicator	Diversity of export products	Total products exported to at least one foreign market with a value of at least US\$10,000
Indicator	Diversity of export markets	Foreign markets to which exporter ships at least one product with a value of at least US\$10,000
Indicator	Dependency on global trade	Trade measured as a proportion of GDP
Sub-Measure	Geopolitical Security	
Indicator	Landmass deterrent	Country landmass, square kilometres
Indicator	Demographic deterrent	Total population
Indicator	Interstate conflict legacies	Years of interstate conflict with neighbouring Index countries as a primary party (1948–2022)
Indicator	Boundary disputes	Overlapping territorial claims and/or unresolved land border and maritime demarcations (2021)
Indicator	Non-location bound (as an advantage)	<i>Not owning territory, as well as ability to function primarily under more than one international location</i>
Indicator	No cultural, national loyalties or obligations (as an advantage)	<i>Lack of accountability to population/users/followers – don't need to maintain welfare</i>
Sub-Measure	Nuclear Deterrent	
Indicator	Nuclear weapons capability	<i>Entities with nuclear weapons</i>
Indicator	Nuclear immunity: decentralized or non-location bound	<i>Decentralized or non-location bound</i>
Sub-Measure	Future Resources	

³⁸ https://www.cdc.gov/nchs/data/factsheets/factsheet_measuring_nations_health.pdf

Indicator	GDP forecast 2030	GDP forecast at purchasing power parity, constant 2022 prices
Indicator	Economic capability 2030	Beckley formula: GDP by GDP per capita forecast at purchasing power parity, 0–100
Indicator	Working-age population forecast 2050	Medium variant forecast for total working-age population, 15–64
Indicator	Labor dividend 2020-50	Forecast gains in working-age population, adjusted for quality of the workforce and climate change resilience (2022-50); quality is proxied by GDP per worker in 2022 at purchasing power parity
Measure	Diplomatic Influence & Allies	
Sub-Measure	Alliances	
Indicator	Trade with region	Total value of trade with Index countries, current dollars
Indicator	Primary trade partner	<i>Number of Index countries in which entity is the primary regional trading partner</i>
Indicator	Economic Agreements/Instruments	<i>Global FTAs, Regional FTAs, Foreign assistance (global), Foreign assistance (regional), includng International Agreements and Treaties for non-states</i>
Indicator	Support from other country's defense	<i>Military alliances, joint training, foreign assistance, arms weapons and technology donated, combined operations, and military support</i>
Sub-Measure	Diplomatic Network	
Indicator	Embassies & Offices	<i>The regional and global reach of a country or businesses diplomatic or business offices. Look at not how many embassies, consulates/offices, but how many countries embassies, consulates/offices are in.</i>
Indicator	Memberships	<i>Membership in select summits, diplomatic clubs and regional intergovernmental organisations (including those that fit non-states too)</i>
Sub-Measure	Multilateral Power	
Indicator	Litigational or Regulation goals/alliances	<i>Strategic partnerships, joint alliances related to international regulations and litigations</i>
Indicator	Multilateral Forums	<i>A country's or business's participation and diplomatic clout in multilateral forums (example: UN participation, Institutional voting shares, UN capital contributions, Voting alignment, Voting partners, influence in trade agreements, non-state multilateral forums)</i>
Sub-Measure	Foreign Policy	
Indicator	Efficacy of leadership	<i>Efficacy of political or business leaders in advancing their country's or business's diplomatic interests regionally & globally</i>
Indicator	Strategic Ambition	<i>Extent to which political or business leaders demonstrate strategic ambition</i>
Indicator	Litigation power	<i>A country or business's money and resources for litigation, as well as settlements achieved</i>
Indicator	Evading Regulations	<i>A country or businesses history in evading regulations imposed on them.</i>
Indicator	Incongruent relationships	<i>A country or business's agreements, alliances, trade with partners of economic and political power</i>
Indicator	Residual or contemporary colonialism	<i>Under state control? Level at which a business or country is under another state or business's control (example: under another state or business's control of currency, laws, market, or politics).</i>
Indicator	Deterioration of democracy	<i>Tendencies toward authoritarianism (highly centralized government or organization, political repression and</i>

		<i>little input from population, autocratic policies and processes, isolationism, social control)</i>
Measure	Cultural & Social Influence	
Sub-Measure	Cultural Diffusion	
Indicator	Online search interest	Online interest for a given Index country in 25 other Index countries; average percent of total Google and Baidu searches for selected countries
Indicator	Global brands	Number of brands in the Global 500
Indicator	Cultural and Social Influence worldwide	<i>Extent of spread of beliefs, behaviors, and practices from one business or country to another business or country</i>
Indicator	Cultural Cohesiveness	<i>Cultural Cohesiveness / nationalism / ethnocentrism (survey on factors such as languages, ethnicity, race, nationalism, identity factors)</i>
Sub-Measure	Online Monopolization	
Indicator	Digital Virality	<i>History of instances of virality (being rapidly spread or popularized by means of people communicating with each other, especially through the internet) & relationship to or control of mode of viral instances)</i>
Indicator	Online Information Monopoly	<i>Control, Monopoly over info/online searching, news, online platforms</i>
Sub-Measure	Information Flows	
Indicator	Online Interest for News	<i>Online interest for a given business or nation-state's news</i>
Indicator	Online interest for Newspaper or Magazine	<i>Online interest for a given business or nation-state's newspaper or magazine</i>
Indicator	Online interest for TV	<i>Online interest for a given business or nation-state's international television broadcaster</i>
Indicator	Online interest for streaming video	<i>Online interest for a given business or nation-state's international streaming video</i>
Indicator	Online interest for radio	<i>Online interest for a given business or nation-state's international radio broadcaster</i>
Indicator	Digital network	<i>Users or followers affiliated with online profiles/pages/sites/figures of country or business.</i>
Sub-Measure	People Exchange	
Indicator	Immigrant populations	<i>Average share of total immigrant populations (or users, or followers) resident in other countries</i>