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CHINA: AUTOCRACY 2.0

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ABSTRACT

Autocracy 2.0, exemplified by modern China, is economically robust, technologically advanced, globally engaged, and controlled through subtle and sophisticated methods. What defines China's political economy, and what drives Autocracy 2.0? What is its future direction? I start by discussing two key challenges autocracies face: incentives and information. I then describe Autocracy 1.0's reliance on fear and repression to address these issues. It makes no credible promises, using coercion for compliance, resulting in a low-information environment. Next, I introduce Autocracy 2.0, highlighting its significant shift in handling commitment and information challenges. China uses economic incentives to align interests with regime survival, fostering support. It employs advanced bureaucratic structures and technology to manage incentives and information, enabling success in a high-information environment. Finally, I explore Autocracy 3.0's potential. In China, forces might revert to Autocracy 1.0, using technology for state control as growth slows but aspirations stay high. Globally, modern autocracies, led by China, are becoming major geopolitical forces, challenging the liberal democratic order.

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1   Introduction

An autocratic regime strives for survival while concentrating political power in the hands of a small group of leaders. Since the dawn of the 21st century, a new kind of autocratic regime has emerged that dramatically departs from the totalitarianism and autocracy the world was accustomed to. Autocracy 1.0, exemplified by North Korea and the Soviet Union, was an economic backwater, sustained by coercion and suppression. Autocracy 2.0, most notably demonstrated by contemporary China, is economically vibrant, technologically innovative, internationally engaged, and maintained through soft and sophisticated population controls.

China has experienced an average annual GDP growth rate of 9.01% since 1980, boasting 1.6 million patents just in the year of 2022.[1] In recent years, more than 8 million students graduate from universities in China each year, and another 700,000 study abroad.[2] More than 70% of the population has access to fast internet, and 150 million individuals traveled abroad at least once during the 2010s.[3] All these developments are occurring against a political backdrop where China's Polity Score remains at -7 (with lower scores indicating more autocratic regimes), and Freedom House consistently rates the country's political rights and freedoms in the bottom 10th percentile globally.[4]

What are the key features of China's political economy, and what factors contribute to Autocracy 2.0? Where is this new form of autocracy heading? In this chapter, I examine China's political economy dynamics, drawing insights from recent economics and political science literature.

I begin by describing two two fundamental challenges that autocracy faces: one related to incentives and the other to information. First, autocracy is unable to make credible commitments to citizens, enterprises, and (local) bureaucrats that it won't use power against their interests in the future, thus limiting their incentives to exert effort and comply with the regime. Second, autocracy struggles to gather reliable information about their citizens and local conditions. This information shortage worsens as the regime tightens its control over society.

I then outline the tactics and forces that form the building blocks of Autocracy 1.0,

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1. Source: World Bank GDP growth (annual %) - China and World Intellectual Property Organization (WIPO).

2. Source: Statista: Number of graduates from public colleges and universities in China between 2013 and 2023 and Ministry of Education.

3. Source: COTRI: Statistics of Chinese Outbound Tourism and Statista: Internet penetration rate in China 2008-2021.

4. Source: Center for Systemic Peace: Polity IV Annual Time-Series, 1800-2018 and Freedom House: Freedom in the World 2022.

which uses repression and fear to address these challenges. Autocracy 1.0 extends no credible commitment to citizens, enterprises, and bureaucrats, but compliance is achieved through coercion. As a result of the strong repression, Autocracy 1.0 operates in a low-information environment.

Next, I introduce Autocracy 2.0 — the primary focus of this chapter — which represents a marked departure from Autocracy 1.0 in how the regime navigates its credible commitment and information challenges.[5] China distinguishes its political economy model by using economic incentives and aspirations to generate partial credible commitment to citizens, enterprises and bureaucrats, aligning their interests with regime survival and stimulating regime support. Furthermore, in its Autocracy 2.0 phase, China employs sophisticated bureaucratic structures and technology to monitor and shape incentives and preferences. This approach allows the regime to survive — and even thrive —in a high-information environment.

Finally, I discuss the prospect of Autocracy 3.0. Within China, forces are emerging that may push the political economic equilibrium back to Autocracy 1.0. The regime would likely to benefit from technology that enables an all-encompassing state, highly effective at exerting coercion. This shift is occurring as economic growth slows while citizens' economic aspirations remain high — a result of Autocracy 2.0. Beyond China, the world is likely to experience a new paradigm. Modern autocratic regimes, led by China, are becoming an important geopolitical force and challenging the prevailing liberal democratic world order.

2 Autocracy's fundamental challenges

All autocratic regimes (China included) face two fundamental challenges. First, autocracies are unable to make credible commitments: those controlling political power cannot credibly promise not to use it (Acemoglu and Robinson 2005). The ability to credibly commit to rewarding political supporters — whether for helping to acquire power or defending against threats to power — is key to the survival and success of any political regime. Paradoxically, an autocrat's inability to credibly commit, due to holding too much political power, is one of their biggest constraints.

An incumbent autocrat may agree to share power with other political elites in exchange for their support against an imminent challenger, but could renege once their power is secure. They might promise organizational privileges and resources to the

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5. Autocracy 1.0 and 2.0 are not necessarily chronological evolutions, as their associated forces can coexist simultaneously.

military in exchange for repressing protests, yet nothing prevents them from withdrawing such promises once the threat is eliminated. During a revolution, an autocrat may promise to redistribute wealth to the masses, only to renounce such concessions once the threat subsides. While an autocrat may encourage enterprise and business elites to invest, they always retain the power to tax and even expropriate the output.

Second, autocracies lack credible information about their citizens and local conditions (Egorov and Sonin 2024). Competitive elections, independent interest groups, and a free press — hallmarks of democracy — provide effective information aggregation. Their absence in autocracies prevents regimes from acquiring accurate and timely information about the population. Put simply, the more repressive an autocracy is towards elections, civil society, and the press, the more severely it deprives itself of information. The prevailing principal-agent problem between the autocrat and bureaucrats across the political hierarchy further exacerbates this information asymmetry. Local bureaucrats, who may be more informed about the population and local conditions, have little incentive to supply truthful information to the autocrat.

In the following sections, I will describe how Autocracy 1.0 and 2.0, while sharing the ultimate goal of regime survival, employ distinct approaches to address these fundamental challenges.

3   Autocracy 1.0

Autocracy 1.0 is fundamentally characterized by its repressive nature. Lacking credible commitment to its citizens and officials, the regime relies heavily on coercive measures to maintain control. These measures typically include the use of harsh force, overt acts of repression, and the cultivation of explicit fear among both the general populace and political figures. Such tactics are employed as primary mechanisms for exerting authority and ensuring compliance within the autocratic system.

The effectiveness of Autocracy 1.0 is closely tied to its ability to thrive in an environment where information is scarce and tightly controlled. By limiting access to information and restricting its flow, the autocratic regime can more easily maintain a semblance of security, albeit often only in the short term. This information scarcity serves multiple purposes: it helps prevent the spread of dissenting ideas, limits citizens' awareness of alternatives to the current system, and makes it more challenging for opposition movements to organize effectively.

Autocracy 1.0 characterizes China from its founding in 1949 until the late 1970s when the country began Reform and Opening-up. During this period, fear pervaded both the

population and political circles due to numerous campaigns, movements, and the constant threat of purges, persecutions, or re-education camps. It was an era when even a private statement against the regime to a family member could lead to persecution, let alone organizing or participating in public, collective actions against the Communist regime (e.g., Bai and Wu 2020).[6]

During China's Autocracy 1.0 phase, a severe information shortage existed in both directions. Citizens knew little about the regime and its leaders due to extremely tight control across all channels — mass media, mail communications, and even personnel exchanges like international travel. Conversely, the regime lacked accurate information about citizens and local conditions. Despite potential dissatisfaction, citizens dared not voice their opinions due to repression and severe consequences, leaving the regime unaware of issues they faced. Local bureaucrats, sharing similar fears, often reported inaccurate information to the central authority, sometimes exaggerating positive conditions to signal political loyalty. This dual lack of information from citizens and local bureaucrats has been attributed to many major government failures, as the regime was slow to respond to local crises. The most notable incident was the Great Chinese Famine — information failure and food misallocation caused an estimated 30 million unnatural deaths from 1959 to 1961 (Kung and Chen 2011; Meng, Qian, and Yared 2015).

4 Autocracy 2.0

Over the past several decades, China has shifted from Autocracy 1.0 toward Autocracy 2.0. This progression is gradual and not all elements change simultaneously. However, the move to Autocracy 2.0 is characterized by several significant departures from its predecessor.

First, in addressing the fundamental inability to credibly commit, repression and fear are no longer China's first line of defense. While China cannot resolve the credible commitment problem without redistributing political power and effectively democratizing, the Communist Party has implemented various measures to induce incentive compatibility and ease the lack of credible commitment — at least in certain domains and over certain time horizons. I describe these factors in Section 4.1.

Second, in navigating the regime's fundamental information challenge, China has aimed to allow greater information flow while maintaining control. This is achieved through a combination of sophisticated information management tactics, advanced tech-

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6. Many of the repressive tactics were acquired from the Soviet Union, following the Leninist regime structure (Xu, Forthcoming).

nology, and carefully engineered incentives for bureaucrats. As a result, the Chinese regime not only moves toward more information along the information vs. control trade-off curve, but also manages to push out the curve and expand the frontier of its choices. These factors are detailed in Section 4.2.

4.1 Making autocrats' commitment (partially) credible

I focus on three groups of entities to whom the autocrat's inability to make credible commitment affects their decision-making: citizens (Section 4.1.1), enterprises (Section 4.1.2), and bureaucrats (Section 4.1.3).

While many describe China as growing into a land of prosperity and abundance, I argue that an important source of its stability and ability to extend partially credible commitment is through the regime's careful management of scarcity. This applies to three key areas: limited economic opportunities for citizens, restricted access to political power and support for enterprises, and scarce political promotion opportunities for bureaucrats. The regime manufactures scarcity by funneling opportunities, creating a environment where the presence of limited opportunities alongside competition generates aspirations and aligns incentives between the autocrat and its citizens, enterprises, and bureaucrats.

4.1.1 To citizens

Citizens in China do not share political power by conventional definition. What prevents them from challenging the regime and demanding political rights, especially when the regime's incentives (maximizing political survival and economic rents) clash with citizens' private economic interests? Several factors allow the Chinese regime to partially align its incentives with those of politically powerless citizens, thus partly resolving the regime's credible commitment problem.

Upward mobility and economic opportunities One of the starkest manifestations of an autocracy's inability to offer credible commitment occurs when citizens demand economic redistribution from the incumbent autocrat. In such cases, the autocrat cannot credibly offer this redistribution without ultimately redistributing political power to the citizens.

For a significant portion of the Chinese population, their aspirations for enhanced personal economic circumstances can be effectively addressed if they observe robust overall economic growth in the country. This perception is further reinforced when individuals recognize ample opportunities for upward social and financial mobility, coupled with a

strong belief in their own ability to capitalize on these opportunities.[7] The combination of perceiving nationwide economic prosperity and feeling personally empowered to partake in this growth is crucial for satisfying individual economic desires.

Over the past few decades, China has successfully engineered economic conditions that cultivate this positive outlook among a substantial segment of its populace. The country has created an environment where many citizens can witness tangible improvements in their quality of life and economic standing. This has led to a widespread belief in the possibility of personal economic advancement, which in turn has contributed to social and political stability and continued support for the regime.

China's education system, particularly its college entrance exams, provides a reliable — though not necessarily fair — channel for social mobility. College admission is based on students' performance in a single exam (*Gaokao*), with students admitted to different tiers of universities and majors according to their scores. Admission to colleges, especially elite ones, significantly benefits students' subsequent labor market performance, as identified by comparing students just above or below the admission cutoff (Jia and Li 2021). While admission to elite colleges requires considerable household investment, and students from better socioeconomic backgrounds are overrepresented, there are ample instances of students from poor households having their lives transformed by exceptional exam performance. These success stories serve as examples of mobility and inspiration for many. In fact, when China resumed the college entrance exam in 1978, high school graduates eligible to take the exam tended to hold stronger beliefs that competition is fair and hard work is important and can be rewarded, compared to those just a few years older who missed the opportunity for college admission (Roland and Yang 2017).

China has experienced rapid urbanization, which accounts for a substantial share of household income growth over the past several decades (xin 2014). Urbanization and permission to reside in urban areas are heavily regulated through the household registration system (*Hukou*). Urban residents enjoy significantly higher incomes and better social welfare benefits compared to their rural counterparts (Wallace 2014). For rural residents, the prospect of migrating to urban areas — first as migrant workers and eventually (though not guaranteed) as permanent urban residents — provides a path to upward mobility. This aligns their desire for improved living conditions with the regime's policy promises (Huang et al. 2017).

In addition to providing economic opportunities and shaping the perception of these

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7. The perception of mobility needs not align with the actual rate of mobility; optimism about future growth for example can make one overestimate the rate of upward mobility (see, for example, Benabou and Ok 2001).

opportunities among a large portion of the population, the Chinese regime can strategically influence specific individuals' job prospects for political purposes. Wen (2022) finds that state-owned enterprises became more likely to employ Uyghur men after ethnic violent incidents involving the Uyghur minority. This employment strategy may serve as both a carrot — offering economic opportunities to those who might struggle in the labor market — and a stick — increasing the cost of participating in unrest by threatening job termination.

Real estate property ownership and the rise of urban middle class   Since the late 1990s, China has undergone a series of reforms that commercialized the real estate market and established property rights over real estate (Liu and Xiong 2018).[8] Survey evidence suggests that nearly 90% of urban dwellers in China owned real estate as of 2015 (Li and Fan 2020), noticeably higher than most countries (Huang, He, and Gan 2021). Among these property owners, housing assets made up at least 66% of their total assets as of 2016.[9]

Real estate ownership provides strong incentives for citizens to support economic growth and social — even political — stability, as these factors help maintain property values.[10] This alignment of interests between property owners and the governing authority, including an autocratic regime, can be substantial. While there's no direct empirical evidence of this mechanism in China, recent studies offer relevant insights. Research shows that property ownership influences political preferences and participation in the US (Yoder 2020). Similarly, asset ownership through the stock market correlates with increased support for peace and stability in the Palestinian-Israeli conflict ((Jha and Shayo 2019). These findings underscore the broader implications of asset ownership on citizens' political outlooks and their propensity to favor stability and peaceful resolutions to conflicts.

Nationalism and collective interests   While property ownership indirectly encourages citizens to care about the state and its social and political order, the regime can also directly and explicitly foster citizens' concern for the state beyond their private interests. A powerful way to achieve this is through the cultivation and management of nationalism.

Carefully crafted nationalism allows citizens to voluntarily sacrifice their private interests for the collective good, and to entrust and support a strong regime in pursuing

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8. More precisely, households could own and trade long-term leasing rights of the property, since the state owns all urban land.

9. Source: Survey Report on China's Household Wealth, 2017, edited by China Economic Trend Research Institute of the Economic Daily.

10. He et al. 2023 finds that real estate market in Hong Kong prices in political uncertainty and property more exposed to political uncertainty is traded at a discount.

national goals.[11] A vivid illustration is how the regime encouraged mass anti-Japanese protests and systematic boycotting of Japanese goods in response to territorial disputes between the two countries. The regime then dialed down the nationalism when it grew overheated and when the disputes subsided (Weiss 2014).

The Communist regime strategically employs nationalism as a powerful tool to garner widespread public support for various large-scale initiatives. This approach is particularly effective in justifying and generating enthusiasm for ambitious projects that primarily serve to demonstrate national prowess and technological advancement, rather than directly improving the daily lives of citizens.

By invoking nationalist sentiments, the regime is able to allocate substantial financial resources towards these high-profile endeavors. This often comes at the expense of less conspicuous but arguably more crucial initiatives. For instance, fiscal resources directed towards improving fundamental aspects of citizens' well-being, such as enhancing healthcare infrastructure and services for children in rural areas, are consistently undersupplied (Rozelle and Hell 2020).

4.1.2 To enterprises

Entrepreneurs and investors may underinvest in promising enterprises because autocrats can't credibly commit to not confiscating assets. This leads to underperformance among these businesses.

A direct way for the regime to alleviate concerns about a lack of credible commitment is the nominal expansion of political rights to major stakeholders of the enterprise, especially those in the private sector who fear the risk of confiscation most. This shift in momentum occurred when the Communist Party ratified "the Three Represents" during its Party Congress in 2002. Departing from its traditional roots in the working class, the Party sought to "represent the development trend of China's advanced productive forces," paving the way for business elites to be formally incorporated into the Party. Consequently, China's National People's Congress, the country's highest formal government institution, saw a rapid expansion of membership to business elites. While such representation doesn't equate to real power in policymaking, it allows business elites to access political power and instill confidence regarding the alignment between the interests of the Party and enterprises (Truex 2016).

An autocrat's commitment to avoid confiscation can be credibly established among enterprises in certain sectors when their output directly enhances the regime's survival

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11. Importantly, nationalism does not necessarily imply support of the Communist regime. The deliberate blend of party-state helps equate nationalism and support of the Communist Party (Koss 2018).

and stability. As the regime's survival may depend on an industry's continuous growth and innovation, enterprises can infer that their own survival is credibly assured by the regime. A prime example is China's facial recognition artificial intelligence (AI) sector. Beraja et al. (2023) document that local political unrest prompts the public security arm of the government to substantially increase procurement of facial recognition AI services. The deployment of facial recognition AI, in turn, leads to a reduction in future unrest incidents. In other words, facial recognition AI firms and their products help bolster political stability, and this political usefulness yields credible commitment against *ex-post* confiscation. Moreover, the political implications of the output also prevent *ex-ante* hold-up of the technology and the sector (Acemoglu and Robinson 2006). It's crucial to note that credible commitment may remain absent for many sectors and enterprises: the regime might find no political usefulness in — or even feel threatened by — certain technologies or outputs of certain sectors.

4.1.3 To bureaucrats

When an autocrat can't reliably promise to share political power, bureaucrats throughout the political hierarchy might lack motivation or even oppose the current regime. To address this, the Communist Party uses a centralized system for personnel management and political promotion as an alternative way to incentivize bureaucrats.

Over the years, the Communist Party has developed a convention of political promotion based on a tournament structure. The primary criterion for this competition is local economic performance, specifically local GDP growth.[12] b=Bureaucrats, such as Party Secretaries at the prefecture level, compete with others of the same rank within their jurisdiction. For example, Party Secretaries in the same province vie for promotion; those overseeing localities with higher relative growth rates are substantially more likely to advance in the political hierarchy.

Li and Zhou (2005) first document this empirical pattern using political turnover data of top provincial leaders between 1979 and 1995. Similar tournament structures have been identified across various levels of the political hierarchy. While this tournament-style system based on local economic performance accurately describes promotion patterns, it's important to note that it isn't formally stipulated in the Communist Party's organizational documents. Rather, it's more akin to a norm that has evolved over decades of practice than a formal rule.

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12. The presence of the tournament does not preclude factors not associated with performance to affect political promotion, most noticeable membership in particular political fractions (Francois, Trebbi, and Xiao 2023).

The tournament structure of political promotion provides a clear objective and expectation among bureaucrats regarding the return on their efforts, particularly in fostering local economic growth. The realization of political promotion among top performers, in turn, substitutes for an autocrat's explicit commitment to power-sharing.

As local enterprises' performance directly contributes to overall local economic performance, local bureaucrats become incentivized to align with local enterprises' growth. This alignment occurs regardless of whether bureaucrats have direct equity stakes in the firms or whether the firms enjoy explicit political connections (Bai, Hsieh, and Song 2020). Consequently, political competition over local economic performance generates a credible commitment to local enterprises that local bureaucrats will not become a "grabbing hand," despite formal institutions that fail to offer proper protection of property rights or guarantee the rule of law (Fang, Li, and Wu 2022).

One significant drawback of the political tournament system is the potential for excessive competition, which may lead to local protectionism and cross-region externalities that competitive bureaucrats either ignore or strategically exploit. While these competition externalities are byproducts of the tournament incentive structure, institutional reforms — such as introducing more centralized courts by removing local governments' control over local courts' financial and personnel decisions — could safeguard against court decisions that facilitate excessive local protectionism (Liu et al. 2024).

4.2 Enhancing autocrat's control in information-rich environment

The Chinese regime faces another fundamental trade-off in its pursuit of political stability: exerting more aggressive control versus retaining accurate information on citizens and local conditions. Autocracy 2.0 differs from Autocracy 1.0's heavy emphasis on control in two key ways.[13] First, it relaxes extreme control measures, allowing for more information flow as it navigates this trade-off (Section 4.2.1). Second, it expands the regime's capacity to exert social control and ensure stability without sacrificing information content among citizens and within the political hierarchy (Section 4.2.2).

4.2.1 Political control in information-rich environment

Limited tolerance toward sensitive information, protests, and local elections   In Autocracy 1.0, a stable regime aims to remove all sensitive content from the media, suppress all protests, and crack down on any attempt to hold elections or support political chal-

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13. Guriev and Treisman (2019) describe the informational autocrats equilibrium and document a general shift toward informational control among autocracies.

lengers. During China's Autocracy 2.0 phase, however, we observe millions of social media posts containing politically sensitive information, thousands of annual street protests, and competitive village elections. These are not signs that the regime has lost control. In fact, the Chinese regime has the capacity to censor most social media content, quell all protests, and ban village elections — but it chooses not to do so.

The need for more information is a common explanation for the regime's choice. Tolerating sensitive information on media, especially social media, enables the regime to gather enough data for effective surveillance and sentiment monitoring. For example, Buntaine et al. (2024) study this possibility in the context of local pollution conditions. Complete censorship would rob the regime of crucial information needed to predict upcoming protests, detect unrest, and identify corrupt local officials. As Qin, Strömberg, and Wu (2017) demonstrate, even a small number of such posts can be incredibly valuable to the regime.

Tolerating protests allows the regime to gather information on local grievances and devise policy responses before dissatisfaction escalates beyond control (Lorentzen et al. 2013). Media censorship and citizens' self-censorship would prevent such information from surfacing and reaching the government. Protests serve as a mechanism to aggregate this urgent information. Similarly, tolerating competitive village elections enables the regime to leverage citizens' knowledge of local conditions to select suitable and capable local officials and hold them accountable (Martinez-Bravo et al. 2022).

It's crucial to note that tolerating protests, allowing sensitive information in the media, and permitting village elections doesn't equate to relinquishing control or granting full civil liberties. This tolerance is limited in scope as the regime balances the informational benefits against the relaxation of control. Large protests that spread quickly or target the central government are rarely tolerated (O'brien and Li 2006). Sensitive information aimed at mobilizing major collective actions or revealing significant scandals of the central authorities is promptly censored (King, Pan, and Roberts 2013). Moreover, competitive and open elections at formal bureaucratic ranks — county level or above — are never permitted.

Administrative delegation with local bureaucrats   Local governments have an informational advantage regarding local conditions. This information asymmetry between local and central governments can exist regardless of whether a principal-agent problem (i.e., misaligned incentives) is present. For example, local governments may know important metrics of local economic conditions that could help configure specific policies, but the central government may not understand the relevance of these conditions and

thus not inquire about such information in the first place. Local governments might also deliberately withhold information on certain local conditions if it reveals their poor governance quality and could hinder the political prospects of local bureaucrats.

The Chinese regime addresses such information asymmetry by combining the political tournament structure aforementioned with delegating a wide range of administrative power to local governments (Zhou 2008).[14] This administrative delegation doesn't undermine tournament incentives so long as the regime can define and directly measure evaluation criteria, primarily local economic performance. The central government observes local GDP growth rates along with other auxiliary economic performance indicators that corroborate the measurement of GDP growth.[15] To the extent that incentivizing local GDP growth is what the central government ultimately cares about, then the political tournament with centralized monitoring sets up the appropriate incentive structure among the local government, and the central government does not necessarily need to distinguish exactly how local governments maximize their growth rates (within the bound of national regulations). As a result, local governments have considerable flexibility to tailor policies to local conditions, greatly reducing the central government's need for detailed local information.

More generally, political tournaments and administrative delegation enable local bureaucrats to compete as political entrepreneurs who can most effectively deliver economic growth. The central government rewards policy innovations and effective implementation by local governments. When local bureaucrats participate in policy experimentation coordinated by the central government, especially when they provide policy configurations that are distinctive and (locally) effective, their chance of political promotion experiences a significant increase (Wang and Yang, Forthcoming).

The central government has incorporated dimensions beyond economic performance into its tournament promotion criteria. Notably, it imposes a veto on promotion if a local government fails to contain protests or political unrest (including large labor strikes) below a specific threshold, especially if the unrest spreads to other localities. If the central government views protest occurrence as the primary indicator of local political stability, encompassing all related local performance, policies, and socioeconomic conditions that might trigger protests, it can maintain effective control without gathering additional local

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14. Such decentralization is distinct from federalism, as China's administrative decentralization is not supported by political decentralization; the central government and the Communist Party retain all political power, especially power over personnel appointment across the political hierarchy.

15. The published GDP figures are at times distorted (Martinez 2022)), and one does not know exactly what additional information the central government obtains on local economic performance beyond the published GDP number.

political information. By using protest occurrence data to implement political tournament, the central government effectively delegates this control task to local governments through political contracting (Campante, Chor, and Li 2023).[16]

An important by-product of administrative delegation is that it allows the central government and the regime to shift blame for policy failures to local governments. From citizens' perspective, local authorities are visibly the policy implementers. While there's a limit to such blame-shifting, it likely contributes to the prevailing pattern where citizens' trust in the central government remains substantially higher than their trust in local government (Saich 2012).

Shaping citizens' information exposure in information-rich environment The Chinese regime, initially hesitant, now embraces the internet and various mass media while effectively managing to control information flow and citizens' information exposure. Below, I highlight several important tactics.

First, the regime partially censors the internet and uses both monetary and non-monetary costs to regulate exposure to politically sensitive information. Specifically, the Chinese government employs the Great Firewall to block citizens from accessing many foreign websites such as Google, Facebook, YouTube, and news outlets like The New York Times. While the access restriction is porous, it's sufficient to prevent the vast majority of the population from encountering sensitive content (Roberts 2018). This effectiveness stems from the fact that demand for information is endogenous: it is shaped by beliefs about the value of accessing censored content, which in turn is a result of past exposure (Chen and Yang 2019). Consequently, porous censorship creates an environment where most of the population hasn't been exposed to sensitive content on censored outlets, doesn't believe such content has high value, and thus doesn't seek access to the uncensored internet. This approach makes the censorship apparatus robust without aggressively overhauling internet content.

Second, the Chinese regime strategically injects content online to divert readers' attention from sensitive topics that may generate controversy and discontent. King, Pan, and Roberts (2017) find that the government fabricates hundreds of millions of social media comments annually to distract and divert discussion from topics that could potentially draw collective attention. While explicitly blocking content could raise curiosity and risk backlash (the so-called "forbidden fruit effect"), this diversion strategy especially effective in information-rich environments where audience attention span and search capacity are

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16. Note that introducing dimensions of performance evaluation criteria generates multi-tasking problem as well as complication in the central governments' ability accurately inferring efforts from outcomes. (Chen, Jiang, and Ling 2024)

limited.

Third, the regime can combine political messages with content types that are readily accepted by the population, thus maximizing potential attention and exposure. In particular, the regime encourages incorporating political messages into entertainment media products, as pure informational content has relatively low demand among the population. For example, Zhuang (2023) finds that an increasing number of recent TV dramas aired during prime time feature Sino-Japanese War themes. Exposure to these TV dramas, especially privately produced ones, substantially increases the audience's anti-Japanese sentiment and broader nationalism.

4.2.2   Pushing out the frontier of information-control trade-off

In addition to changes along the information-control trade-off curve, the Chinese regime manages to push out the information-control trade-off frontier.

Education as indoctrination   Education is often considered one of the most important tools through which the state exercises control over its population, especially in the long term. In China, the central government maintains tight control over the education system. This control ranges from licensing school operations to administering exams, setting admission criteria, and managing the content taught in schools.

School content, when combined with high-stakes exams following closely on the content, can effectively shape students' knowledge, preferences, beliefs, and ultimately their ideology. Cantoni et al. (2017) find that as the state alters high school curriculum content (e.g., promoting more skepticism towards the market and support for state economic intervention), students' ideology changes accordingly. These changes persist even years after exposure to the content and among elite college students who might be expected to process information more critically. Such shifts in stated preferences, while not necessarily reflecting students' true, private beliefs, may transform into genuine preferences after repeated exposure. More importantly, these shifts can lay the foundation for new social norms on the topic.

By aligning students more closely with the state's ideology and policy orientation, and fostering general support for the regime, the government can potentially achieve multiple objectives. First, it may be able to relax its population control measures, as citizens who are more ideologically aligned with the state might be more likely to adhere to government policies voluntarily. Second, this ideological alignment could allow for a greater flow of information within society, as the government may feel more confident that citizens will interpret and respond to information in ways that align with state interests,

ceteris paribus.

Technology to enhance efficiency and capacity of social control   The Chinese regime has eagerly adopted advanced technology to bolster its social control apparatus, leveraging the vast amount of information available to the state. This is particularly evident in the case of artificial intelligence. AI, a technology aimed at making better predictions using large quantities of data, can enhance surveillance and social control by predicting human behavior — a crucial input for any surveillance operation.

Beraja et al. (2023) find that equipping public security agencies with facial recognition AI technology can effectively suppress subsequent political unrest. This technology aids social control in several ways: it facilitates targeted arrests of unrest organizers before or at the start of incidents; it uses crowd size and flow prediction to guide preemptive police deployment when and where unrest is likely to occur; and it generates deterrence by preventing anonymous participation through identity linkage.While facial recognition AI complements the social control apparatus, it doesn't entirely replace human input (Beraja et al. 2023).[17] Localities that deploy this technology reduce overall police force recruitment but increase the proportion of desk job police that requires higher education to interact with the AI's outputs.

Technologies have also been developed and adopted to aid censorship. Real-time content censoring in instant messaging, especially for multimedia, has been challenging due to the need for quick, automated processes to avoid time lags to ensure effective censorship. However, advanced visual learning algorithms now detect sensitive content in images and videos on popular social media and messaging platforms (e.g., see Knockel and Xiong 2019), significantly expanding regimes' ability to censor online content accurately.

A sophisticated approach used by WeChat, a major messaging and social media platform, applies server-side (rather than client-side) censorship (Kenyon 2020). This means specific content can be censored and made invisible to targeted receiver without the sender's knowledge. The aggressiveness of censorship can be individually tailored. These technological solutions limit potential self-censorship among senders, as many don't know which messages might have triggered censorship. This further enhances regimes' ability to retain information while maintaining control.

Does political use of technology slow down technological advancement?   The regime's continued use of cutting-edge technologies for social control depends on the ongoing in-

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17. In fact, China's surveillance system features a vast, labor-intensive infrastructure (Pei 2024).

novation of these technologies. This innovation can't be taken for granted, as political use might distort and hinder technological progress. While it's hard to gauge the innovation potential across all politically deployed tech sectors, facial recognition AI and large language models (LLMs) are two areas where political applications haven't yet slowed technological advancement in China. If anything, political applications may stimulate further innovation.

As discussed in Section 4.1.2, the more these technologies boost social and political control, the more credible the regime's commitment against future expropriation becomes. This credibility ensures ample investment in these sectors.

Both facial recognition AI and LLM technologies are data-intensive, requiring firms to access vast amounts of high-quality data for ongoing development. In the case of facial recognition AI, the state collects and owns extensive data from street surveillance cameras nationwide. As firms provide services to the regime, they gain access to this facial data. The more data firms receive, the more productive they become in creating new software — not just for government use, but also for the commercial market, thanks to data's economies of scale (Beraja, Yang, and Yuchtman 2023). In the case of LLMs, while Chinese social media text corpus might lack sufficient data on sensitive topics, uncensored platforms like Facebook and X offer alternative Chinese-language data sources, partly making up for domestic data shortages (Yang 2023).

5   Autocracy 3.0?

From the 1980s to the early 2010s, China gradually evolved from Autocracy 1.0 to 2.0. Now, I pose a more challenging question: where is China's autocratic regime heading, and what might Autocracy 3.0 look like? I'll address this in two parts: Section 5.1 discusses the Chinese regime domestically, while Section 5.2 explores its impact on the world order.

5.1   Domestically, return to the basics

The evolution from Autocracy 1.0 to 2.0 ultimately reflects the regime's navigation of the trade-off between security and control on one side, and vibrancy and growth on the other. At the micro level, this trade-off manifests in the regime's choice between loyalty and competency of its citizens and bureaucrats. Autocracy 1.0 represents an equilibrium where security and control are maximized, with no weight given to vibrancy and growth. In contrast, the Autocracy 2.0 equilibrium allows the Chinese regime to prioritize

vibrancy and growth without substantially sacrificing — and perhaps even enhancing — security and control.

However, Autocracy 2.0 may not be a stable equilibrium. Its stability hinges on sustaining key factors that stimulate economic growth, which may be difficult to achieve. For instance, the high growth rate might naturally slow as the economy expands. Growth could also decrease due to policies that fail to adequately adjust for the country's demographic transition (see, for example, Bloom, Canning, and Sevilla 2001 and Prasad 2023) or local government's fiscal burden (see, for example, Gyourko et al. 2022). If the Chinese regime opts for even more vibrancy and growth at the expense of security and control, we might see Autocracy 2.0 transition to 3.0, potentially resulting in a genuine reallocation of political power to the masses. Conversely, if the regime prioritizes security and control in response to the economic and social headwind, Autocracy 3.0 may resemble its 1.0 predecessor. Recent trends suggest we are facing the latter scenario.

Mismatch between economic downturn and long-run aspirations   Autocracy 2.0 has established and benefited from high expectations of growth and upward mobility. The slowdown of economic growth — regardless of its cause — may not immediately trigger adjustments in these expectations. The resulting mismatch between expectations and economic realities could further erode optimism.

According to a large set of surveys conducted between 2004 and 2014, most respondents in China expressed optimism that the economic and political system could deliver more opportunities in the future and that effort and hard work were rewarded. However, in 2023, when confronted with the same questions, respondents were substantially less likely to believe that effort pays off and more likely to blame the economic and political system for lack of opportunities (Rozelle, Alisky, and Whyte 2024). While this shift doesn't imply imminent social unrest, the growing dissatisfaction due to the economic pessimism and pressure for redistribution can undermine the autocrat's credible commitment, which is sustained through economic optimism and aspirations.

Exerting control over the private sector erode credible commitment   Since 2019, the Chinese regime has imposed sudden and aggressive regulations on several sectors, almost immediately stifling their growth or even survival prospects. Examples include the digital payment and financial industry (2020), the gaming industry (2021), the after-school education industry (2021), and the ride-sharing industry (2022).

A less aggressive but more prevalent indicator of control is the extension of Party influence in enterprises. Mueller, Wen, and Wu (2023) document a substantial rise in Com-

munist Party influence within enterprise organizational structures since 2017. Although much of this influence may be rhetorical, it signals an erosion of the regime's commitment to the enterprises during Autocracy 2.0.

In response to these targeted crackdowns and increased control measures, early indicators suggest a concerning return to a low credible commitment equilibrium. This precarious state is characterized by a marked reluctance among investors to commit capital, stemming from heightened apprehensions regarding policy volatility and potential asset seizure.[18] This hesitancy is particularly evident in sectors that have been directly affected by recent regulatory actions, but its ripple effects are being felt across the broader economic spectrum.

The potential consequences of this low credible commitment equilibrium are far-reaching. It not only impacts immediate capital inflows but also poses challenges for long-term economic growth and innovation. As investors withhold or redirect their investments, entrepreneurs slowdown their business ventures, they could lead to a slowdown in technological advancements, job creation, and overall economic dynamism.

Purges of bureaucrats break the tournament incentives   The delicate political tournament system based on economic performance allows the Chinese regime to align incentives with local bureaucrats. This system hinges on maintaining a norm and expectation among local bureaucrats that delivering economic performance is the primary metric for tournament competition.

This norm and expectation began to break down in 2012 when President Xi Jinping initiated an anti-corruption campaign that has arrested and disrupted the promotion of more than 4.71 million bureaucrats.[19] While there's no conclusive evidence that the anti-corruption campaign is merely a power grab, political connections with the Party's top echelon do provide some protection against investigation and purge (Lorentzen and Lu 2018), and the campaign has also disrupted the promotion prospects of bureaucrats who stimulate the local economy through discounted land transactions (Chen and Kung 2019). Consequently, and more generally, local political entrepreneurship and policy innovation are less rewarded in terms of promotion, while loyal implementation of the central government policies has become a much stronger predictor of promotion prospects (Luo, Wang, and Yang 2024).

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18. Source: Bloomberg News, https://shorturl.at/15hY6.
19. Source: Xinhua News Agency, http://www.news.cn/politics/2022-06/30/c_1128793505.htm.

Technology equipping an all-encompassing state   The potential return to Autocracy 1.0 is facilitated by a more capable state. While Autocracy 2.0 creates the economic conditions that push the regime towards a more coercive Autocracy 1.0 equilibrium, it simultaneously provides the technological capabilities to extend the regime's effective control. This enhanced control makes Autocracy 1.0 more attractive from the autocrats' perspective.

Advanced technologies developed and deployed during the Autocracy 2.0 phase, coupled with continuous innovation in this sphere, create a strong incentive for the regime to revert to a more coercive equilibrium. Technologies may substantially reduce the financial and logistical costs associated with coercion, while simultaneously expanding the regime's capacity to implement comprehensive control across a multitude of domains encompassing citizen, enterprise, and bureaucrat behavior. For instance, artificial intelligence and a ubiquitous credit scoring system could, in theory, allow the regime to leverage social stigma and engineer an incentive structure that encourages citizens and enterprises to internalize political objectives they might otherwise oppose or ignore (Tirole 2021).

5.2   Internationally, leap to the future

Beyond China's domestic political and economic dynamics, its emergence as Autocracy 2.0 and its path toward Autocracy 3.0 would have global implications.

China's political economy could influence the world in several distinct ways. First, China's emphasis on security and control might lead to more security-focused and confrontational international policies. Second, markets and opportunities beyond China's borders allow it to address specific domestic political tensions. These policies are (domestically) politically motivated but not necessarily geopolitically driven. Third, China's economic scale alone would enable it to exert geopolitical influence, regardless of whether such power is intentionally acquired. Given China's economic heft, its international policy would profoundly impact the geopolitical landscape, the balance of power between liberal democracies and autocracies, and the internal political dynamics of other autocratic regimes.

Managing external threats   Security-oriented international policies both require and justify domestic sentiment about external threats. This sentiment promotes domestic political stability and may stimulate innovation.

While there has been little direct empirical evidence on China, recent literature shows that external threats during the Cold War significantly reduced internal political division in the US, likely due to the "common enemy" narrative (Bordalo, Tabellini, and Yang

2020). War threats, in particular, can encourage greater efforts and coordination in innovation, spurring technological progress. This was evident in the R&D efforts during World War II in the US (Gross and Sampat 2023).

As China adopts a more confrontational approach toward the US, Europe, and other liberal democracies (in response to similarly confrontational policies targeting China), one might expect a growing sentiment of external threats in China. This could further unite the country and support economic and technological policies aimed at reducing dependence on geopolitical "enemies." Consequently, China may become more self-reliant and pivot its trade activities toward allies and pseudo-allies, who are primarily autocracies.

Using global market to alleviate domestic political economy pressure   International financial exchanges are not always explicitly designed with geopolitical influence as their primary objective. Nevertheless, even those exchanges that lack overt geopolitical motivations can inadvertently create opportunities for exerting geopolitical leverage.

This complex interplay between economic interactions and political influence is exemplified in China's foreign aid allocation patterns. A significant portion of China's foreign aid is primarily driven by domestic political considerations (Mueller 2024). For instance, infrastructure aid contracts awarded to Chinese companies serve as a mechanism to alleviate specific unemployment pressures within China. These projects provide employment opportunities for Chinese workers and contracts for Chinese firms, thereby addressing domestic economic challenges.

However, this aid serves a dual purpose that extends beyond China's borders. While stabilizing domestic politics remains a primary objective, these financial exchanges simultaneously lay the groundwork for potential geopolitical influence. The provision of aid, particularly when it results in tangible economic benefits for recipient countries, can create a sense of indebtedness or goodwill towards China. This, in turn, can be leveraged by China to exert influence in various spheres, including diplomatic, economic, or strategic realms. The potential for geopolitical leverage becomes especially pronounced when the aid generates positive economic impacts in recipient countries, which is found to indeed the case among many recipients.

Expanding geopolitical power via trade and financial exchanges   Exporting specific products could allow China to extend its political influence to the importing countries. Focusing on facial recognition AI technology that is effective at curbing political unrest in China, Beraja et al. (2024) document that China dominates its global exports. Autocracies and weak democracies are more likely to import it, especially during times of domestic

political unrest. These imports often coincide with a decline in institutional quality in these countries, reflecting their regimes' desire for greater political control. In essence, China's emergence as a leading AI innovator could push countries away from liberal democratic institutions through the trade of technologies that enhance autocratic rule.

Global trade and financial exchanges may also provide China with broader opportunities to exert geopolitical influence. The structure of trade yields power. Liu and Yang (2024) demonstrate that asymmetric trade exposure, particularly in sectors with low trade elasticities, allows countries to wield international power and foster bilateral engagement. China's global trade expansion has significantly increased its trade-derived power, which it could leverage when countries are geopolitically misaligned.

Moreover, large-scale economies can coordinate threats across various economic domains to further enhance their geopolitical impact. For instance, China's Belt and Road Initiative could boost the borrowing capacity of member countries — many of which are autocracies. This, in turn, could enable China to demand greater political concessions from these governments (Clayton, Maggiori, and Schreger 2023).

6   Conclusion

In this chapter, I describe how China, as a modern autocracy, navigates the fundamental challenges of lack of credible commitment and accurate information. I argue that key features of the Chinese regime are noticeably different from Autocracy 1.0, supporting a new equilibrium — Autocracy 2.0 — where partial credible commitment is established and political control is maintained in an information-rich environment.

This chapter draws on exciting, often recent research on this topic. However, many aspects of Autocracy 2.0 and the shift from Autocracy 1.0 to 2.0 remain poorly understood and lack empirical documentation. I am excited and eagerly anticipate the future development of this literature that would provide us with a more comprehensive depiction of Autocracy 2.0.

As China potentially stands at a crossroads beyond Autocracy 2.0, it is imperative to comprehensively analyze and understand the factors that are shaping the distinct paths the regime might take in the future. While I describe a scenario of returning to Autocracy 1.0, there could very well be a different path, an alternative equilibrium that the Chinese regime embarks on — students of political economy are well aware of the many critical junctures and major contingencies on such processes.

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