# NEG Card Doc---Run for the Roses---Round 3

## DA---Competition

### 1NC

#### Market competition is high and stable.

Ashton ’25 [Fred; June 16; MA applied economics, Director of Competition Policy at the American Action Forum; American Action Forum, "Update: Are Monopolies Really a Growing Feature of the U.S. Economy?" https://www.americanactionforum.org/research/update-are-monopolies-really-a-growing-feature-of-the-u-s-economy/] \*Language edited in brackets

Introduction

In July 2021, President Biden’s Executive Order on “Promoting Competition in the American Economy” set in motion a “whole-of-government” approach to antitrust enforcement that was broadly skeptical of market concentration. The fear among the nation’s trustbusters was that “excessive market concentration” was threatening “basic economic liberties, democratic accountability, and the welfare of workers, farmers, small businesses, startups, and consumers.”

This concern prompted the federal antitrust agencies – the Federal Trade Commission and Department of Justice – to rewrite the jointly published 2023 Merger Guidelines. The updated guidelines jettisoned the consumer welfare standard that had guided antitrust enforcement for nearly 50 years and replaced it with a “big is bad” approach focusing largely on firm size. The agencies adopted several policies designed to quash merger activity by raising the cost of mergers.

Like previous iterations, new data from the 2022 Economic Census show no evidence to support the claim the oligopolies and monopolies were gaining ground as the predominant market structure in the U.S. economy. Most industries continued to operate in a low-concentration environment.

This research – which provides an update to previous American Action Forum research that found, using the 2017 Economic Census, no evidence to support the claim of increased industry concentration – finds that the share of industries operating in high, medium, and low concentration environments has remained relatively stable over the past 20 years.

Market Concentration Levels

To measure concentration, this study focuses on the share of sales by the four largest firms (CR4) in an industry and identifies industries using the North American Industry Classification System (NAICS). There are degrees of specificity ranging from a 2-digit NAICS code (a general sector, e.g., 22 – Utilities) to a 6-digit code (a specific industry, e.g., 221115 – Wind Electric Power Generation).

The main finding is displayed in Figure 1. It shows that the distribution of market concentration largely remained unchanged between 2002 and 2022. In 2002, just 9 percent of all 6-digit NAICS industries were classified as highly concentrated with a CR4 of 70 percent or greater. Fast forward to 2022, and the share of highly concentrated industries was slightly lower at 8 percent, unchanged from 2017.

The average CR4 for all 6-digit NAICS industries in 2002 was 35.0 percent. That level increased to 36.8 percent in 2007 before falling to 35.2 percent in 2012, to 34.8 percent in 2017, and to 34.7 percent in 2022 (the last year for which there are data).

Comparing 6-digit NAICS codes with data for both 2002 and 2022, the average change in CR4 was 2.6 percentage points. Forty percent of firms saw a decrease in the CR4, while just 21 percent saw an increase of 10 percentage points or more.

For industries with data for both 2017 and 2022, nearly half (46.9 percent) saw a decrease in the CR4, showing a lower share of sales among the four largest firms. The average change in the CR4 was an increase of 0.4 percentage points, while the median change was up 0.2 percentage points. Of the industries that saw an increase in concentration ratios, only 5.6 percent increased by at least 10 percentage points.

The stability of the distribution among low, medium, and high concentration levels and the small share of the sample with an increase of the CR4 of greater than 10 percentage points makes it difficult to argue that industries have become more concentrated over time.

Figure 1

Market Concentration Levels by Sector

Is it possible that the use of broad averages across detailed industries masks increased concentration? To check this, this study shows that an analysis of each industry over time also fails to support the theory that markets have become more concentrated. The series of graphs below show the share of 6-digit NAICS code by concentration level for each overall industry (e.g., Information sector). The share of low, medium, and high levels of concentration remained relatively consistent over the 20-year span.

The table below shows the rank correlation coefficient between time periods. The calculation uses the subset of the data with six-digit NAICS industry groups and observations in both time periods. Each five-year gap had a rank correlation coefficient between 0.94 and 0.95, meaning there was little movement in the rank of a CR4 concentration level for an individual six-digit NAICS code. In other words, an industry that was more concentrated in one year tended to remain more concentrated in the following year. The ranked correlation coefficient between 2002 and 2022 dropped to 0.84, suggesting that this relationship is not as strong across a wider period.

Conclusion

There is a lack of evidence to support the claim that industries are becoming more concentrated and, if left unchecked, the largest firms will exert some level of monopolist power. Indeed, the data from the Economic Census show that average concentration ratios have remained largely unchanged over the past 20 years and the share of highly concentrated firms remained [limited] muted.

While the definition of a “market” is undoubtedly fluid and unlikely to be captured perfectly by the NAICS definitions, these data show that competitive markets (low concentration) are the predominant landscape for most industries.

#### Industry-level bargaining is anti-competitive. It enables large firms to impose barriers to entry and price out competitors, causing consolidation.

Valtat ’19 [Antoine; November 26; PhD candidate at École Polytechnique; Essays on sectoral-level wage bargaining, “Large firms’ collusion in the labor market: Evidence from collective bargaining,” p. 11-12, https://theses.hal.science/tel-02381257v1/file/86088\_VALTAT\_2019\_archivage.pdf]

Wage setting can occur at different levels, from the most decentralised level - firm level - to the most centralised one - national level. In their seminal paper, Calmfors and Driffill (1988) show that the intermediate level of centralisation - industry level - leads to the worse macroeconomic performance. The simultaneity of the German decentralisation of wage bargaining and resurgence of the German economy in the 1990s seems to corroborate such findings (Dustmann et al., 2014). We argue in this paper that some common features of industry-level wage bargaining can produce the effect of an anti-competitive tool. Indeed, in several countries, among which France, Italy or Portugal, the bargained wages are extended to all firms of the industry, whether they sit at the negotiating table or not, and firms cannot opt out from these agreements. Because of this extension system, the characteristics of bargaining firms are a crucial component of the bargaining outcome. If bargaining firms have different characteristics, and thus different objectives, as the average firm in the industry - ie are unrepresentative of the industry, the bargained wage may favour affiliated firms. In particular, the domination of employers federations by large firms 1 - that we will denote unrepresentativeness in the following - , tilts the bargaining process in their favour, generating a cartel effect. Therefore, dominant firms can use collective bargaining as a tool to raise the labor cost of competitors, and in doing so, reduce the number of producing firms. The following quote, extracted from an Economic survey of the OECD on Portugal (see OECD (2012)), summarizes this mechanism.

“[...] dominant firms impose wage and working conditions on others via the administrative extension of collective agreements, reducing competition and entry, thereby hurting competitiveness.”.

OECD, Economic surveys Portugal, 2012.

In the first two parts of the paper, we compare within a Melitz-type model (Melitz (2003)) two different levels of wage bargaining : firm-level and industry-level bargaining. First, we find that the higher the productivity-level of the firm, the higher the rent to be shared, so the higher the wage negotiated at the firm-level. As a consequence, when there is an industry-level wage floor, it is binding only for small firms, and it raises the wages they pay above their optimal level, thus driving them out of the market . The higher the domination of large firms on the employers federations, the higher the wage floors, which is detrimental to small firms. Equivalently, the more employers federations are dominated by large firms, the higher the negotiated wage floor and, as a result, the lower the product market concentration. We depict the main results of our model in Figure 1.1.

FIGURE 1.1 : Results from our theoretical model

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We then empirically confirm the collusion effect highlighted by the model. We first derive novel stylized facts on the relation between the representativeness of employers federations and the degree of competition of an industry. To measure representativeness we construct a novel proxy using unique data from the Minister of Labour. This dataset enables us to compare for the first time the average size, for each industry agreement, of the bargaining firms as compared to the average size of all firms of the industry - ie bargaining and non-bargaining firms. The index built therefore proxies the domination of employers federations by large firms, ie the federations’ unrepresentativeness. We find a positive correlation between unrepresentativeness and product market concentration, as well as between unrepresentativeness and small firm’s destruction rate.

In our model, the mechanism explaining the positive correlation between federations unrepresentativeness and product market concentration is that bargaining firms have higher incentives to raise wage floors the larger they are compared to the average firm of the industry - ie the more unrepresentative the employers federation. Our model indeed establishes that large firms always have higher incentives than small firms to raise the wage floors because it enables them to evict the small firms from the market. However, for that to translate into higher wage floors, bargaining firms must be the large firms. Therefore, the over-representation of large firms in employers federations - that we call unrepresentativeness of federations - is a crucial component to understand the outcomes of the bargaining system. In other words, bargaining firms have differential incentives to raise wage floors whether they are representative or not of the average firm in the industry.

#### Insufficient competition causes cyber-attacks---removes the incentive to invest and spawns tech monocultures.

Duan ’20 [Charles; May 11; JD, Director of Technology and Innovation Policy at R Street Institute and Assistant Professor at American University Washington College of Law; Santa Clara High Technology Law Journal, “Of Monopolies and Monocultures: The Intersection of Patents and National Security,” vol. 36]

Strong competition can thus complement national security by enhancing domestic cybersecurity, and patent assertion that unduly weakens competition detracts from cybersecurity.156 Competition promotes better cybersecurity in at least two ways. First, multiple studies show that competition encourages firms to improve their products on multiple vectors including cybersecurity. Second, competition avoids a situation that security experts call a “monoculture,” which increases vulnerability to severe cyberattacks. As former Secretary of Homeland Security Michael Chertoff wrote recently, “We need competition and multiple providers, not a potentially vulnerable technological monoculture,” to guarantee national security.157 Thus, cybersecurity provides a useful lens for understanding how unfettered patent assertion and licensing can detract from national security.

A. Cybersecurity as Competitive Value-Add

Competition enhances national security by reducing the incidence of technical vulnerabilities. That effect is especially important for security sensitive systems such as mobile telecommunications.

Intuitively, a causal chain from competition to cybersecurity makes logical sense. Computer security is a value-added benefit to consumers, so firms in competitive markets are likely to use security to gain an edge over their competitors.158 In monopolized markets, though, there may be less external impetus to test products for flaws, and the monopolist may choose to focus less on security and more on new product features or increased product quality.

Economic research confirms these hypotheses about competition leading to better cybersecurity. A 2009 empirical study of web browsers considered the impact of market concentration on the amount of time that vendors took to fix security vulnerabilities as they were discovered.159 The study found that the presence of more competitors correlated with faster cybersecurity response—a reduction of 8-10 days in response time per additional market rival.160 Similarly, business researchers in 2005 modeled incentives for firms to engage in sharing of cybersecurity information, and concluded that the “inclination to share information and invest in security technologies increases as the degree of competitiveness in an industry increases.”161 Another study found that, where two software firms are in competition, at least one will be willing to take on some degree of risk and responsibility for cybersecurity, whereas a monopoly software firm will consistently fail to accept such responsibility.162 To be sure, an unpublished study from 2017 found that some market concentration can make firms more responsive to cybersecurity issues, but only to a point: “being in a dominant position reduces the positive effect of having less competitors on the responsiveness of the vendor,” and indeed the “more dominant the firm is, the less rapid it is in releasing security patches.”163 This research confirms that competition is more conducive to cybersecurity.

It is not hard to see how this applies to emerging communication technologies markets. In the absence of competition, the above research suggests that device manufacturers, chip makers, and software developers will lack incentives to respond to vulnerabilities, to share information about cybersecurity practices and issues, and to take responsibility for security matters. Mobile phone chips have had their share of cybersecurity failures already.164 The best way to flush out ongoing and future cybersecurity issues is to maintain competitive pressure at all levels of the supply chain.

B. Vulnerabilities of “Monocultures”  
A second reason why monopoly undermines cybersecurity is that monopoly leads to a “monoculture” of single-vendor products, opening the door to massive systemic failure in the case of a cyberattack. Computer researchers developed the theory of software monocultures in the early 2000s, in response to the regular phenomenon of computer viruses and other attacks spreading rapidly by exploiting flaws in the dominant operating system at the time, Microsoft Windows.165 Where a computer system such as Windows has a commanding share of users, a virus that exploits a flaw in that system can quickly spread to infect a whole interconnected ecosystem. An operating system monopoly thus enables fast and easy spread of cyberattacks, and better cybersecurity would be achieved through greater diversity in online systems.166 As one research group posited, “a network architecture that supports a collection of heterogeneous network elements for the same functional capability offers a greater possibility of surviving security attacks as compared to homogeneous networks.”167

There has been considerable study of the theory that computer monocultures are naturally more vulnerable to attacks.168 In one study, computer science researchers reviewed a catalog of 6,340 software vulnerabilities recorded in 2007, to compare whether comparable software would share the same flaws.169 Of the 2,627 vulnerabilities applicable to application software (as opposed to operating systems, web scripts, and other software components), only 29 (1.1%) applied to substitute products from different vendors but providing the same functionality.170 By contrast, different versions of a single software product were found to share vulnerabilities 84.7% of the time.171 Thus, software monocultures share exploitable flaws even when there is some variation in versions across the monoculture; by contrast, diversity in software is almost guaranteed to prevent a single flaw from affecting all users.

In the case of 5G and wireless mobile communications, a monoculture is an especially concerning possibility. To the extent that systems such as smart city sensors or communication networks are widely deployed in a monoculture fashion, a widespread attack could have devastating consequences, potentially blacking out a region and affecting essential services such as 911.172 A monoculture that is vulnerable to so-called “rootkits” or “backdoors”—maliciously installed software that enable bad actors to commandeer systems—could also enable mass surveillance or spying by private hackers or foreign governments.173 The presence of systems from multiple vendors would mitigate these possibilities.

The monoculture theory is not without critics, but a review of those criticisms shows them to be inapplicable to contemporary communication technologies. Some critics suggest that software diversity imposes unwarranted costs on firms who must forego economies of scale and devise seemingly duplicative yet different setups of computer systems.174 But those concerns largely focus on the situation where a single firm produces and manages heterogeneous systems, concerns that are avoided where heterogeneity arises naturally through competition between two unrelated firms. Critics also argue that technological measures can create “artificial diversity” through automated randomization of software code, so software engineers can purportedly solve monoculture issues and device users need not worry about the issue.175 But even these critics acknowledge that artificial diversity techniques are often insufficient because they must make assumptions about what aspects of the technology are most vulnerable to attack, and they concede that artificial diversity cannot stop attacks involving operation of legitimate software functions in undesirable ways (sending spam emails or deleting document files, for example).176

#### Cyber-attacks spread through interlinked systems. Extinction.

Acton ’20 [James M.; Spring 2020; PhD, co-director of the Nuclear Policy Program at the Carnegie Endowment for International Peace; Dædalus, “Cyber Warfare & Inadvertent Escalation,” vol. 149, https://doi.org/10.1162/daed\_a\_01794] \*Language edited

The vulnerability of nuclear forces and C3I systems creates the risk of inadvertent escalation: that is, escalation resulting from military operations or threats that are not intended to be escalatory. So-called crisis instability, for example, could arise if a state were afraid of being disarmed more or less completely in a preemptive strike by an adversary, whether or not such fears were well founded.4 In the most extreme case, “use-’em-or-lose-’em” pressures could lead the state to employ nuclear weapons, conceivably in its own preemptive attempt to disarm its adversary, but more likely in a limited way to try to terrify the opponent into backing down. In less extreme scenarios, a state afraid of being disarmed might take steps—issuing nuclear threats, for example, or dispersing mobile nuclear forces—that raised the likelihood of nuclear use later.

This danger is likely to be exacerbated by any cyber vulnerabilities affecting nuclear forces and C3I systems. Most directly, the existence of such vulnerabilities could intensify existing fears of being disarmed—fears that are already acute in China and Russia (as well as in Pakistan and, most likely, North Korea).5 However, because of their unique characteristics and effects, cyber threats could create at least three qualitatively new mechanisms by which a nuclear-armed state might come to the incorrect conclusion that its nuclear deterrent was under threat. First, the purpose of cyber interference could be misinterpreted. In particular, espionage could be mistaken for an attack. Second, a cyberattack could have a more significant effect than intended. Malware implanted into information technology (IT) systems associated with non-nuclear weapons could accidentally spread into more sensitive nuclear-related systems, for instance. Third, the initiator of a cyber operation could be misidentified. An operation carried out by a third party, for example, could be misattributed by one state in a bilateral confrontation to its opponent. What makes these pathways so pernicious is that the catalyst for escalation could appear to its initiator to be a relatively benign action.

To make matters worse, such pathways could lead to inadvertent escalation even if the target of the cyber interference were not afraid of being completely disarmed. Today at least, this description fits the United States. If, in a conflict against Russia, say, the United States wrongly concluded that its strategic early-warning system was under cyberattack, it might reason that Moscow was seeking to undermine U.S. missile defenses, which use early-warning data, prior to launching a nuclear attack.6 Given that U.S. declaratory policy explicitly highlights the option of a nuclear response to non-nuclear attacks on nuclear C3I assets, such a “misinterpreted warning” might lead Washington to use nuclear weapons.7 But even if it did not, its response, which might include nuclear threats, could still be escalatory.

My focus here is narrowly limited to inadvertent cyber threats against, or interference with, one state’s nuclear forces or C3I systems by another nuclear-armed state (C3I systems encompass not only communication capabilities, but also the intelligence, surveillance, and reconnaissance capabilities, including early warning, that would be critical to decision-making). To be sure, cyber vulnerabilities probably create other escalation risks too, though, in my judgment, they are less serious.8 For example, while no state would likely try to detonate another’s nuclear weapons, a nihilistic terrorist group might (though it is unclear whether such a group could obtain the requisite cyber capabilities). Separately, vulnerabilities associated with conventional forces or their C3I systems could increase the likelihood of a conventional war’s escalating to a higher level of violence, thus making nuclear use more credible.9

Cyber interference with nuclear forces and C3I systems can involve two (not mutually exclusive) types of operations: espionage and attack. Cyber espionage involves collecting data from a target IT system without otherwise damaging it. A cyberattack involves undermining the operations of the target system, typically by compromising the integrity or availability of data. Cyber tools suitable for surveilling or attacking nuclear forces or C3I systems have innumerable differences from noncyber tools, which are themselves quite varied. Six of these differences are particularly salient to the risk of inadvertent nuclear escalation.

First, cyber espionage offers the potential to obtain information about an adversary’s military forces and operations that cannot plausibly be obtained in any other way. By accessing an adversary’s C3I systems directly, cyber tools may be capable of exfiltrating exceptionally sensitive information, such as the locations of mobile delivery systems. This is not to suggest that cyber surveillance is infallible. As a security measure, for example, a state could choose not to track the movements of its mobile delivery systems (or it could do so only approximately). Alternatively or additionally, it could try to use a cyber intrusion in its networks to feed misinformation to the adversary. In spite of these and other limitations, however, cyber espionage almost certainly offers unique advantages. For example, no practical constellation of high-resolution surveillance satellites in low Earth orbit could provide continuous coverage of a given location on Earth’s surface.10 Cyber surveillance, by contrast, may allow for continuous monitoring of an adversary’s military posture.

Second, cyber weapons offer an unparalleled capability to manipulate the data that go into decision-making. Other types of weapons, by destroying or disabling sensors or communication systems, can also deny data to decision-makers. However, their use generally alerts the target to the fact it is under attack. By contrast, if a well-designed cyber weapon is used, a loss of data may appear to be, say, the result of a malfunction, potentially allowing the attacker to conduct surprise follow-on attacks. Even more significant, cyber weapons can be used to feed false information to decision-makers. For example, the Stuxnet virus, which was reportedly developed by the United States and Israel, was designed not only to destroy centrifuges at Iran’s Natanz enrichment plant, but also to hinder plant operators from discovering the cause of these failures by producing falsely reassuring readings on monitoring equipment.11 In a similar vein, sophisticated cyber weapons offer a unique capability to shape an adversary’s perception of a battlefield by feeding misinformation into C3I systems.12 To be sure, information operations have always been a part of warfare. However, cyber weapons represent a sea change because their effects can be tailored with great precision in real time, and because they could be used to directly influence the perceptions of high-level decision-makers.

Third, cyber operations—whether conducted for espionage or offensive purposes—can present particularly significant risks of unanticipated collateral effects, that is, of affecting IT systems other than the intended target.13 Noncyber weapons can, of course, lead to collateral damage. Yet such effects are inherently constrained by geography. Moreover, the likelihood of physical collateral damage can be often quantified, at least to some extent (military planners may be able to estimate, for example, the probability of an incoming weapon missing its military target and hitting a nearby civilian facility).14 The risks of collateral effects in cyberspace are much more difficult to estimate. Minimizing such effects relies, in part, on detailed intelligence about the target network and on connections between it and other networks. Obtaining the requisite intelligence is potentially much more difficult than identifying what surrounds a target in physical space (as is verifying that the resulting picture is complete). To complicate matters further, sophisticated malware must generally be tailored to each target and, if revealed, will become ineffective once the adversary can clean its networks and fix whatever exploit was used to gain access. As a result, the effects of cyber weapons cannot usually be understood through testing, further increasing the likelihood of unanticipated collateral damage (simulations can be used but they are only as good as the available intelligence on the target).

Fourth, in peacetime, malware used to enable a cyberattack may often be inserted into an enemy’s networks—but not activated—in the hope that it will remain undetected and thus can be used in a potential future crisis or conflict. (In theory, not only can a vulnerability in an operational IT system be exploited in this way, but so too could security weaknesses in the supply chain for the system’s components.) Noncyber weapons, by contrast, are generally used as and when the decision to authorize a strike on a particular target is taken.15 One consequence of this difference is that, if a state discovers dormant malware in its networks, it can be faced with the challenge of attributing it—that is, identifying which entity is responsible for its implantation—before activation. The equivalent challenge rarely arises with the kinds of noncyber weapons typically used in interstate warfare (though it does arise in irregular warfare or counterterrorism with unexploded ordnance).

Fifth, and relatedly, cyberattacks are generally easier to conceal than other forms of attack. As a result, decision-makers may be more inclined to authorize them. In fact, if the goal is for a cyber weapon to have either a persistent effect or an effect when triggered at some future time, the malware used in the attack must remain hidden to be effective because exposure could enable the adversary to take countermeasures.

Sixth, and finally, distinguishing between offensive operations and espionage is significantly more challenging in cyberspace than in other domains.16 To be sure, the line dividing espionage and offensive operations in physical space is not always entirely clear. Aircraft—unmanned aerial vehicles (UAVs), in particular—are used for both surveillance and offensive operations. But the distinction is much murkier in cyberspace. One challenge is that identifying the purpose of a piece of malware—understanding whether it can be used for espionage, offensive purposes, or both—can be time-consuming. In a fast-moving conflict or crisis, this process might move slower than decision-making. Moreover, even if a state quickly and confidently established that a piece of malware could be used solely for espionage, it could not be confident that whatever vulnerability was used to introduce the malware would not also be exploited for offensive purposes—at least until it had identified and fixed the vulnerability.

States can threaten each other’s nuclear forces through a combination of offensive “counterforce” operations to target nuclear-weapon delivery systems preemptively, and air and missile defense operations to intercept whatever remained. The United States openly acknowledges it would seek to limit the damage it would suffer in a nuclear war.17 Russian doctrine is believed to embrace a similar concept.18 India may be moving in the same direction.19

The question of whether, in practice, a state could actually succeed in limiting the damage it would suffer in a nuclear war to an extent that decision-makers would consider meaningful is currently a subject of considerable debate.20 However, from the perspective of inadvertent escalation, what matters is not whether damage-limitation operations would actually prove effective, but whether a potential target believes they might. In this context, Chinese and Russian fears that the United States is seeking the capabilities—non-nuclear capabilities, in particular—to negate their nuclear deterrents could prove escalatory in a crisis or conflict by generating “crisis instability,” that is, pressures to use nuclear weapons before losing the capability to do so.21 And even though the United States is not concerned today about the possibility of being disarmed, Washington appears to be less sanguine about the future, given growing threats to its C3I assets, in particular.

Cyber capabilities could contribute to damage-limitation operations in two distinct ways. First, cyber espionage could prove useful in collecting intelligence that might increase the effectiveness of counterforce attacks and air and missile defenses, especially if complemented by effective analytic tools for synthesizing large amounts of data from multiple sources.22 If cyber espionage helped reveal the locations of mobile weapons, for example, it could enable preemptive attacks against them. And if it helped to reveal targeting data, it could assist defenses in intercepting missiles and aircraft after launch.

Second, cyber weapons could be used, alongside other capabilities, to conduct counterforce strikes. A hypothetical cyber “kill switch” that could permanently shut down an adversary’s nuclear C3I systems would certainly be attractive to any state with a damage-limitation doctrine. In practice, this kind of perfect capability seems fanciful, not least because a state could find analog or even nonelectronic ways to use its own nuclear forces given enough time (in fact, some states may even prepare such means in advance). At best, therefore, a cyberattack could be a “pause button” that delayed an adversary’s ability to use its nuclear weapons. Real cyber weapons are likely to be still less effective, however. All nuclear-armed states likely operate multiple C3I systems with some degree of redundancy between them. Cyber operations would probably not prove equally effective against these different systems, potentially delaying the target from using some elements of its nuclear forces for longer periods of time than others.

Even given these limitations, however, cyberattacks could still assist with damage limitation. They could buy more time for counterforce operations to attrite an opponent’s nuclear forces and reduce the coherence of any retaliatory attacks, somewhat simplifying the task of air and missile defenses. Moreover, the potential for cyberattacks to shape an adversary’s perceptions could prove valuable. For example, an attacker might try to “~~blind~~” [shut down] its adversary’s early-warning system just before launching counterforce strikes on its nuclear forces.

Just how effective cyber-enabled damage-limitation operations might prove in an actual conflict is far from clear, not least because of the difficulty of testing cyber weapons. That said, any state that has made the enormous investments necessary to develop damage-limitation capabilities is likely to spend relatively modest additional sums on developing complementary cyber tools, and it might reach a different conclusion about their potential efficacy. Even more important, from the perspective of inadvertent escalation, its potential adversaries might do so too.

China, in particular, appears to be concerned about cyber-enabled damage limitation. Summarizing the thinking of their peers on this subject, two Chinese scholars, Tong Zhao and Li Bin, have concluded that “Chinese analysts have demonstrated an acute awareness of the potential vulnerabilities of the country’s nuclear C3I system, particularly against cyber infiltrations.”23 Russian views have been less aired. In fact, a dichotomy has emerged in what little public discussion there has been. For example, three respected experts, including a former general officer in Russia’s Strategic Rocket Forces, have recently played down the threat, arguing that “because the command-and-control systems of strategic nuclear forces are isolated and highly protected, they are, in all probability, not vulnerable to cyber attacks.”24 At about the same time, however, another influential Russian scholar argued that, among the emerging non-nuclear technologies that could threaten nuclear forces, “probably the most dangerous development is cyber weapons, which could be used for non-nuclear disarming and decapitating attack by completely paralysing the entire command-and-control system.”25 News reports that Russia has created cyber defense units for its nuclear forces suggest that the Russian military may be less than sanguine about the cyber threat.26

Fears about cyber-enabled damage limitation may be particularly pernicious because of the potential difficulty of detecting a cyberattack. A sophisticated cyberattack on nuclear forces or C3I systems could conceivably occur without being detected. In the extreme case, a state might only find out that it had been attacked when it attempted to launch nuclear weapons and discovered that its ability to do so had been impeded in some way. If a state believed that it would be unlikely to detect an ongoing cyberattack, then it could rationally conclude that it might be under attack even in the absence of attack indicators. The simple belief that an opponent had highly sophisticated cyber capabilities could, therefore, precipitate a false positive—the incorrect assessment that an attack was underway—by itself. By contrast, if a state’s nuclear forces were under assault from kinetic strikes, the target would likely be aware. To be sure, it is still not entirely impossible that a state could wrongly come to believe it was under kinetic attack. Early-warning systems, for example, have produced false warnings of incoming ballistic missile strikes.27 But mistakes of this kind could be identified once the incoming weapons ceased to exist (though the window of time before they disappeared could be particularly dangerous).

To make matters worse, a state that was concerned about its nuclear forces and C3I systems coming under cyberattack might be inclined, especially in a crisis or conflict, to interpret ambiguous indicators in the worst possible light. For example, if one of its nuclear C3I systems malfunctioned because of, say, bad design or aging components, it might wrongly attribute the failure to a cyberattack (in fact, the temptation among operators to do so might be particularly strong if they would otherwise be held responsible for an internal failure). Regardless of precisely how it arose, however, a false positive that occurred in a crisis or conflict could generate significant escalation pressures.

Concerns about the potential for cyber operations to enhance the effectiveness of damage limitation can have effects beyond generating crisis instability at a time of heightened tensions or during a conflict. In peacetime, such concerns may induce nuclear-armed states to take steps to try to ensure that nuclear weapons could be employed when duly ordered in a crisis or conflict, even at the expense of exacerbating the danger of inadvertent or unauthorized use. Concerned states, for example, could remove permissive action links—electronic “locks” designed to prevent the unauthorized use of nuclear weapons—because of the perceived danger that they could be hacked and thus subverted to prevent authorized use.28

Alternatively or additionally, states could make plans to predelegate the authority to use nuclear weapons down the chain of command to guard against the possibility of the communication links serving national leaders being severed. The dangers of predelegation depend, in part, on the degree of flexibility afforded to commanders in determining whether and how to use nuclear weapons. Nevertheless, certain risks are inherent in any model. A localized communications failure might be mistaken for an attack, for example, leading to inadvertent use.29 Predelegation also increases the risk of unauthorized use because a field commander could order the use of nuclear weapons in a scenario in which he or she was not permitted to do so. This danger becomes greater as more people are granted launch authority. In this respect, cyber threats could promote a particularly dangerous form of predelegation by inducing a state to entrust launch authority to the relatively large number of lower-level officers who are capable of issuing a launch order without electronic communications.

Surveillance operations in cyberspace, even if conducted exclusively for defensive purposes, pose unique risks of escalation. Cyber surveillance of an adversary’s nuclear forces can serve purposes besides damage limitation. In any dyad involving two nuclear-armed states, each has a strong incentive to monitor the status of the other’s nuclear forces at all times—and particularly during a crisis or conflict—including for the exclusively defensive purpose of spotting any preparations for nuclear use. Several intelligence collection techniques, including overhead imagery and signals intelligence, are likely used for this purpose. Given the potentially unique advantages of surveillance in cyberspace, however, states may see good reason to adopt it alongside these other approaches, especially if they judge that the likelihood of cyber espionage being detected is small.

Depending on the sophistication of the malware used and the target’s defenses, the true likelihood of being detected may or may not be small, but the consequences of being caught could be significant. In fact, if the target detected ongoing cyber espionage of networks associated with its nuclear forces or C3I systems, inadvertent escalation could result from either of two concerns that are distinct from those that might plausibly be generated by other forms of surveillance.

First, even if the target of cyber interference were convinced that the operation was being conducted exclusively for the purpose of espionage, it might worry that the data being collected could be used against it in damage-limitation operations. Intelligence collection in physical space could also enable damage limitation, but it differs from cyber surveillance in one critical respect. In a crisis or conflict, a state would generally have no way of knowing whether or not countermeasures against physical surveillance (such as camouflage or concealment) had proved effective—unless its nuclear forces were successfully attacked. By contrast, if it detected an ongoing effort to collect intelligence through its C3I networks, it would know definitively that at least some of its cyber defenses had failed. This realization might lead the state to fear that attacks on its nuclear forces were imminent.

Second, because of the difficulty of rapidly distinguishing cyber espionage from a cyberattack, espionage against nuclear forces or C3I systems would risk being misinterpreted as an attack. In theory, the use of armed UAVs for surveillance of an adversary’s nuclear forces could generate a similar risk. However, a state motivated by purely defensive considerations would have strong and obvious reasons not to use armed UAVs in this way.

The risks resulting from cyber espionage being mistaken as an attack would depend on who had initiated the operation and who was the target. China or Russia might assess that U.S. cyber surveillance was actually an offensive effort intended to undermine—or, more likely, give Washington the option of undermining—Beijing’s or Moscow’s ability to launch nuclear weapons, thus potentially generating crisis instability. By contrast, because Washington is apparently more confident in the survivability of its nuclear deterrent, cyber espionage directed against U.S. nuclear forces or C3I systems would be less likely to have the same result. Nonetheless, such operations would likely be of real concern to Washington and could, for example, be misinterpreted as a prelude to nuclear use by China or Russia.

Even if the two states involved in a crisis or conflict did not engage in any kind of deliberate cyber interference with one another’s nuclear forces or C3I systems, one of them might wrongly conclude that the other had. Such a misperception, which could be the result of collateral effects or third-party action, could also induce escalation through crisis instability or misinterpreted warning.

A state that eschewed cyber operations of any kind against an opponent’s nuclear forces or C3I systems might still launch such operations against adversary military networks involved exclusively in non-nuclear operations. If, because of design flaws, imperfect intelligence, or mistakes in execution, the malware used in such attacks spread and infected networks that were involved in nuclear operations, the target might conclude that its nuclear forces or C3I systems were under deliberate cyberattack or cyber surveillance.

There could be collateral effects even if a state’s networks for nuclear operations were entirely isolated; air-gapping (physically isolating one particular network from others) is, after all, not a cyber security panacea.30 Moreover, achieving perfect isolation could prove difficult in practice.31 To give but one reason, every nuclear-armed state, apart from the United Kingdom, has dual-use delivery systems, which can be used to deliver nuclear or non-nuclear weapons. Such delivery systems represent a potential point of contact between the C3I systems supporting nuclear operations and those supporting non-nuclear operations.

In practice, some nuclear-armed states—perhaps many or even all of them—have not tried to isolate their nuclear C3I systems. The United States, for example, has a number of dual-use C3I assets for communications and early warning that support both nuclear and non-nuclear operations.32 Other nuclear-armed states, including China and Russia, may as well, but are less transparent.33 Because the networks supporting dual-use C3I assets are likely to be connected directly to others involved in non-nuclear operations, there may be a particularly high risk of their being subject to collateral effects.

### Impact---Cyber---2NC

#### Digital attacks cause spoofs, miscalc, and a first strike.

Ellison ’25 [Davis, Tim Sweijs, and Timur Ghirotto; March 2025; PhD Candidate, King’s College Department of War Studies; PhD, Director of Research at Tte Hague Centre for Strategic Studies; MS, Assistant Analyst at the Hague Centre for Strategic Studies; Deterring or Spiralling? Emerging Technologies, Strategic Stability, and Prospects for Sino-European Arms Control, “First strike and bolts from the blue: EDTs and offence,” Ch. 3]

From a deterrence stability perspective, early warning systems play a key role in maintaining the credibility of second-strike capabilities. If a cyber attack successfully disables or manipulates an adversary’s early warning systems, it could severely undermine the confidence in their ability to detect and respond to an attack.57 This could trigger a first-strike incentive for an adversary who believes that an opponent may not be able to detect or respond to an initial strike. Furthermore, the uncertainty created by the compromised early warning system may lead states to question their reliance on these technologies, potentially prompting them to expand their nuclear arsenals or develop redundant early warning networks to mitigate this risk.58 This could result in an arms race, as each side seeks to ensure that its early warning capabilities remain functional even in the face of potential cyber threats.59

Crisis stability is particularly vulnerable to cyber attacks on early warning systems. During periods of heightened tension, when military actions are closely monitored, a cyber attack that disables or manipulates these systems can create confusion and miscalculation.60 For instance, if a state believes its early warning system has detected an incoming missile attack due to a cyber manipulation, it may feel compelled to launch a pre-emptive strike, believing that its adversary is preparing for a nuclear strike.61 Similarly, if early warning systems are disabled during a crisis, decision-makers may feel the urgency to strike pre-emptively before losing their capability to retaliate. This use-it-or-lose-it dynamic exacerbates the likelihood of unintended escalation. Cyber attacks that create false positives or false negatives in early warning systems further complicate crisis stability, as states might misinterpret routine activities as hostile actions or fail to detect a genuine attack.62 The compressed decision-making timeline that follows a perceived attack could make it impossible to verify the legitimacy of the threat, leaving leaders with little time to de-escalate the situation or correct errors.

The manipulation or degradation of early warning systems through cyber attacks thus significantly increases the risk of escalation during crisis, as it erodes the ability of states to make rational, well-informed decisions under pressure. This heightened risk of miscalculation, combined with the potential for pre-emptive strikes, poses a serious challenge to strategic stability in the nuclear age.

### Impact---Cyber---Automation---2NC

#### The mere existence of cyber vulnerabilities causes nuclear automation. That escalates.

Schneider ’23 [Jacquelyn, Benjamin Schechter, and Rachael Shaffer; Summer 2023; PhD, Fellow at the Hoover Institution and Director of the Hoover Wargaming and Crisis Simulation Initiative; MA, Senior Analyst and Technology Wargaming Lead at Systems Planning & Analysis, Inc; Research Assistant, US Naval War College International Organization, “Hacking Nuclear Stability: Wargaming Technology, Uncertainty, and Escalation,” vol. 77]

Also of concern is the potential relationship between cyber operations and decisions for predelegation and nuclear alert. Teams with the exploits were more likely to go to nuclear alert, probably as a preemptive hedging response related to their more aggressive planned counterforce campaigns. Groups with the asymmetric vulnerability also had incentives to opt for more dangerous nuclear strategies. The most concerning campaign plans were those that discussed automation, a “dead hand,” or predelegation in response to cyber vulnerabilities—perhaps best illustrated by one survey explanation of how cyber vulnerabilities affected their crisis response plan: that they “incentivized devolution and autonomy of nuclear command. Incentivized de-digitization and movement to analogue NC2.”110 Previous research has concluded that decisions to put forces on nuclear alert or to automate nuclear decision making also increase the chance of accidental or inadvertent escalation to nuclear use, so these choices are concerning for nuclear stability.111

**AND morphs into superintelligence. Extinction.**

**Turchin ’18** [Alexey and David Denkenberger; 2018; \*affiliate scholar and contributing author at IEET; Assistant Professor at the University of Alaska Fairbanks; “Military AI as a Convergent Goal of Self-Improving AI,” *Artificial Intelligence Safety and Security*, pg. 20-22)

5.6. Military AI failure modes

Recently many scientists signed a letter against lethal autonomous weapons (LAWs) (Future of life institute, 2017). But LAWs are not the same as military AI, and LAWs may be the safest part of military AI (Bogosian, 2017). De Spiegeleire and Maas et al. showed that military AI consists of **several layers**, where LAWs are on the lowest level (De Spiegeleire et al., 2017). Advanced military AI (an AI system created by humans for **military proposes**) will probably include several other functions, some of which already exist:

1. Strategic planning for winning in war,

2. Direct control of all units inside the country's defense systems, which may include drones, ships, nuclear weapons, humans, and other large and small units,

3. Nuclear deterrence part, which consists of the **early warning** system and “dead hand” second strike system (which allows retaliation even if the damage is extensive),

4. Manufacturing and constructing new advanced weapons, and

5. Cyberweapons, e.g. instruments "to affect democratic elections" or to turn off adversaries' AI or other critical infrastructure.

Each of these 5 levels could have a **global catastrophic failure**, **even without** starting uncontrollable self-improvement.

Strategic planning AI may have a superhuman winning ability when it comes to games, e.g. AlphaGo Zero (Singh, Okun, & Jackson, 2017), but not when used as an army commander. A strategic AI could fail if it suggests "to strike first now or lose forever"(Kasparov, 2008). In addition, a global military-controlling AI system could propagate a wrong command.

An early warning system could create a false alarm—which has happened before (Future of Life Institute, 2016)—but in the case of an AI-driven warning system, it will be not so easy to recognize a mistake. There also could be a **flash-crash**-style unexpected **war** between two military AIs of two adversarial nation states.

Weapons manufacturing AI may be unexpectedly effective in creating very dangerous weapons, which could later be used with global consequences perhaps **more severe than nuc**lear **war**. For example, the nuclear program in the 1940s resulted in much more effective weapons than were originally planned, such as thermonuclear bombs and the idea of the cobalt bomb (Smith, 2007).

The use of cyberweapons also may be regarded as an act of war or could help to elect a dangerously unstable president (Torres, 2016). Cyberwar may also affect the other side’s critical infrastructure or rewrite the goal functions of the other side’s AI, which could be a bad outcome.

6. Effects of the militarization drive on AI’s values

6.1. Value drift towards instrumental goal

Some authors suggest the idea of orthogonality between AI goals and capabilities (Bostrom, 2014). However, the idea of basic AI drives is an example of the convergence of goals and capability, because any goal will create some set of subgoals, and these subgoals will require capabilities in turn. Available capabilities are cheap and tested instruments of problem-solving, so they will affect the ways the system will act. The capabilities may even have their own self-preservation drives. A good example of this is the military-industrial complex in nation states, which may try lobbying the government to **increase military action**. Military AI will be more effective in violence than in negotiation, and it will likely **choose violence** as its **preferred problem-solving method**.

The AI could get **stuck in** the **militarization** and **never disarm**. This means that AI may never return to its initial beneficial goal, as it will spend most of its available resources on **preparing for future war**. This happened with the Soviet Union, which invested a prodigious amount of resources in the military, rather than its putative priority of workers’ wellbeing.

In other words, the AI may never return to its main goal, as there will be other possible or imaginary enemies. It could have wars—or prepare for such wars—with its own copies, or with hypothetical aliens. This could be presented in a rather rational way: if another civilization exists somewhere in the universe at an unknown distance, it would be rational to prepare for a conflict with it, as the winner will be the one who is better prepared.

Hopefully, the AI will be rational enough to be able to balance its hypothetical military preparations with actually doing good for people, and will not be a military maximizer. But this possibility should be taken into account during the AI’s programming.

A **militarized AI** will likely spend most available resources on building defensive and offensive infrastructure in space. This may include starting a wave of **intelligence explosion** to colonize as much cosmic space as possible. However, as the speed of light limits communication over long distances, space exploration will require the creation of additional military AIs with their own subgoals. There is a non-zero probability that such AIs may **mutate** and return to Earth as **dangerous enemies**. So, the second level of defense is needed against such rebellion, etc.

### Turns Case---2NC

#### DA turns the case at every level:

#### 1. Product market concentration reverses solvency, restoring employer market power.

Perkins ’24 [Joe and Benoît Voudon; February 28; MPhil, Senior Vice President and Head of Research at Compass Lexecon; PhD, associate principal in the European Competition Practice in London; "The not so-simple interaction between labour and product markets: Applications to competition policy," https://www.compasslexecon.com/insights/publications/the-analysis-the-not-so-simple-interaction-between-labour-and-product-markets-applications-to-competition-policy]

An increase in product market power makes the marginal revenue curve steeper – which we can see in the left-hand chart. That has the following effects:

• In the product market, the firms set a higher price and reduce quantity. This is due to reduced product market competition, which increases product market power. As usual, this represents an upward shift along the demand curve, which increases price and reduces the quantity sold – as we can see on the right-hand side of Figure 1.

• In the labour market, the firms can reduce wages. This is purely due to the linkage with the product market, meaning that the reduction in competition in the product market has a secondary effect on outcomes in the labour market. We can see this on the left-hand side of Figure 1, where the change in the marginal revenue curve means that it intersects the marginal cost curve at a lower point. The reduction in the quantity of products sold decreases the firms’ demand for labour, leading to lower employment and lower wages on the labour market side. Graphically – as we can see on the right-hand side – this effect is represented by a downwards move along the labour supply curve.

#### 2. It turns manufacturing---the industry consolidates towards foreign manufacturing firms---less efficient domestic firms get crowded out.

Amiti ‘24 [Mary and Sebastian Heise; May 3; head of Labor and Product Market Studies in the Federal Reserve Bank of New York’s Research and Statistics Group; research economist in Labor and Product Market Studies in the Federal Reserve Bank of New York’s Research and Statistics Group; Federal Reserve Bank of New York, “Has Market Concentration in U.S. Manufacturing Increased? “ https://libertystreeteconomics.newyorkfed.org/2024/05/has-market-concentration-in-u-s-manufacturing-increased/]

The increasing dominance of large firms in the United States has raised concerns about pricing power in the product market. The worry is that large firms, facing fewer competitors, could increase their markups over marginal costs without fear of losing market share. In a recently published paper, we show that although sales of domestic firms have become more concentrated in the manufacturing sector, this development has been accompanied by the entry and growth of foreign firms. Import competition has lowered U.S. producers’ share of the U.S. market and put smaller, less efficient domestic firms out of business. Overall, market concentration in manufacturing was stable in recent decades, though import penetration has greatly altered the makeup of the U.S. manufacturing sector.

Measuring Concentration

Many previous studies have focused on what we refer to as production concentration, which is measured as the sales of the largest U.S. producers as a share of total production in the U.S. That is, it does not take account of imported goods, but does include U.S. firms’ exports. As shown in the charts below, the production concentration of the top-four or top-twenty firms has increased between 1992 and 2012 (blue lines). For questions related to market power in the labor market, the evolution of production concentration is indeed relevant. However, for questions related to market power in the product market, we need to take into account the sales of foreign exporters in the United States (and exclude U.S. firms’ sales abroad). We refer to this measure of concentration as market concentration. The chart below shows that the largest firms’ (which could be U.S. or foreign) share of total sales (inclusive of sales by foreign firms) in U.S. manufacturing industries has been flat in the aggregate (red lines). The construction of market concentration, using the full sales distribution, was only made possible by accessing confidential census data, which report the sales in the U.S. of both domestic firms and foreign exporters.

We illustrate the loss in U.S. firms’ market shares in the chart below, by plotting the distribution of the market shares of foreign firms (in red) and domestic firms (in blue) that are in the top-20 across industries in 1992 (solid lines) and in 2012 (dashed lines). To construct the graph, we take the top 20 firms in each industry, and identify among them the domestic and foreign firms. For any given market share, the height of the blue curve reflects the number of industries where the domestic firms have that market share, and analogously the red curve is for the foreign firms’ market shares.

Two main points stand out. First, the shift to the left of the blue line highlights the fall in the market share of domestic firms between 1992 and 2012. In the average industry, domestic firms in the top-20 had a market share of only about 40 percent in 2012 compared to 50 percent in 1992, which can be seen by comparing the peak of the curves.

Second, the shift to the right in the red line shows that foreign firms have gained some market share in the top-20 during our sample period: the share of industries where foreign firms in the top-20 have a near-zero market share has fallen, while the share of industries where foreign firms have a greater market share than 20 percent has risen. Despite this rise, it is important to note that in many industries the market share of foreign firms in the top-20 is still low: the aggregate market share of foreign firms in manufacturing sales is less than 4 percent in 2012. In our previous post, we showed that most of the foreign firms’ gains occurred at the bottom of the market share distribution.

Is there a causal link between the rise in import competition and the concentration patterns we observe? Over the last few decades, U.S. manufacturing firms have become more exposed to foreign competition: import penetration (defined as the share of imports in domestic sales) has risen by about 10 percentage points between 1992 and 2012, from 10 percent to 20 percent. Our regression analysis shows that, in the average industry, a 10 percentage point increase in import penetration has caused a 2.1 percentage point rise in production concentration (see table below). Intuitively, an increase in import competition leads small, less efficient domestic firms to lose market share relative to larger, more efficient domestic firms. As a result, production concentration rises. We find that this effect is strongest in industries where goods are close substitutes.

#### That deletes the structural incentive for manufacturing investment---that’s their internal link.

Stiglitz ’17 [Joseph; October 26; chief economist and senior fellow at the Roosevelt Institute; Roosevelt Institute, “America Has a Monopoly Problem—and It’s Huge,” https://rooseveltinstitute.org/blog/america-has-a-monopoly-problem-and-its-huge/]

The adverse consequences of the resulting inequality are obvious. But there are numerous indirect consequences, which result in a more poorly performing economy. First, this wealth originating from the capitalization of rents, what I shall call rent-wealth, crowds out capital formation. The weak capital formation of recent years is part and parcel of the growth of rents and rent-wealth—leading to economic stagnation. Secondly, with monopolies, the marginal return to investment is lower than the average return—they know that their prices may decline if they produce more—explaining the anomalous result of huge corporate profits but low corporate investment rates, even as the cost of capital has plummeted. Third, the distortions in the allocation of resources associated with market power lead to a less efficient economy. Fourth, in particular, market power has been used to stifle innovation—just the opposite of the claim of the Chicago School. There is evidence of a decline in the pace of creation of new innovative firms, and especially of new firms headed by young entrepreneurs. Fifthly, the ability of these new behemoths to avoid taxation means that the public is being deprived of essential revenues to invest in infrastructure, people, and technology—contributing again to our economy’s stagnation and distorting our economy by giving these firms an unfair competitive advantage. Sixthly, with money moving from the bottom of the pyramid to the top, which spends a smaller share of income, aggregate demand is weakened, unless offset by other macro-policies. In the decade since the beginning of the Great Recession, fiscal policy has been restrained and, given those constraints, monetary policy has been unable to fill the breach.

#### 4. Concentration turns inequality.

Narechania ’24 [Tejas N. and Ganesh Sitaraman; Fall 2024; JD, Professor of Law at the University of California, Berkeley; JD, Master’s political thought, Professor of Law at Vanderbilt University, Eagle Scout; Yale Law and Policy Review, "An Antimonopoly Approach to Governing Artificial Intelligence," vol. 43, https://yalelawandpolicy.org/antimonopoly-approach-governing-artificial-intelligence]

C. Economic Inequality

Concentration at layers within and across the AI technology stack can also deepen economic inequality in at least two ways. First, concentration means that a small number of firms will capture the vast majority of the financial returns in this sector. As technologist and investor Kai-Fu Lee puts it, “Corporate profits will explode, showering wealth on the elite executives and engineers lucky enough to get in on the action.”[172] For the United States, which is already on the high end of historic economic inequality in the population,[173] continuing the concentration of income and wealth both arrests economic mobility[174] and is undesirable for those who seek a more egalitarian society.

Second, concentration in AI is likely to increase global inequality, as the dominant firms, located in a small number of industrialized and technologized countries, extract value from data that is harvested from other economies.[175] For those who are concerned about the economic well-being of peoples and nations around the world, the concentration of economic benefits within a small number of countries is a problem. And, looking beyond economic considerations, the divide in AI development across the so-called Global North and Global South may have important cultural implications: Predominantly English-based systems accelerate the threats, for example, to endangered languages.[176] In all, as Lee concludes, not only will “AI-rich countries . . . amass great wealth,” but those countries will “also witness the widespread monopolization of the economy and a labor market divided into economic castes.”[177]

### Link---Sectoral Bargaining---2NC

#### Empiricsconfirm incumbent firms and unions will cartelize the wage floor to kill off competitors---gutting innovation AND employment.

Valtat ’19 [Antoine; November 26; PhD candidate at École Polytechnique; Essays on sectoral-level wage bargaining, “Impact of sectoral agreements on creative destruction,” p. 62-63, https://theses.hal.science/tel-02381257v1/file/86088\_VALTAT\_2019\_archivage.pdf]

Acemoglu et al. (2005) persuasively argue that the institutions of a country are the main forces generating economic growth. The reason is that they modify the rewards of innovations, and so the incentives of economic actors to pay the cost of research activities. The economic theory vastly backs up this theory (see Aghion and Griffith (2008) for a summary). Likewise, this has been highlighted empirically. For example Alesina et al. (2005) studied the effect of suppressing entry barriers and state ownership on innovation in India, and found that it increased long-run capital investments in those sectors. Therefore, it clearly appears in economic history that institutions are key parameters to explain the capacity of a country to raise its level of output per worker.This paper focus on the effect of labor market institutions, and more specifically on the level at which bargaining takes place, on the benefits extracted from innovations, and therefore on productivity growth. Entrepreneurs use binding minimum wages negotiated at the industry-level in order to increase the labor cost of competitors and, in doing so, to reduce the returns of innovations. As a consequence the research effort of competitors decreases, as do the probability to become technologically obsolete. On the employees side, this is associated with a reduction of the probability to be dismissed from the firm.

In the first part, I use a model, which is built on the previous work of Klette and Kortum (2004), Aghion et al. (2014) and Lentz and Mortensen (2008), where growth is generated by Schumpetarian creative destruction process. There are two industries, one that produces a single homogeneous good, and the other one which is composed of a continuum of products, of a fixed size, between which exists a monopolistic competition. Furthermore, within the differentiated industry, there is a continuum of firms which produce several distinct products. In order to increase its size a firm must innovate, and , symmetrically, in order to start to produce a potential entrant must also innovate. For each of them, the probability to do so is a positive function of investments and past innovations. In case of success the entrepreneur has a monopoly over a product, and surpasses the former producer in terms of productivity. Consequently, innovation is sensitive to its returns, as entrepreneurs arbitrate between the cost of R&D and its potential payoffs.

The model has several implications. First, when negotiating at the industry-level, incumbent firms and the union take into account the lowering effect of a decrease of profits on the research effort of competitors. Therefore, this decreases the negative impact of a labor cost increase on a firm’s objective, as as it drives down the probability to be replaced. Furthermore, a lower probability for the firm to be outperformed implies that workers have a lower probability to loose their job. This rent-sharing between incumbent firms and their workers generates a wage surplus when it’s negotiated at the industry-level, compared to the situation where the wage is negotiated at the firm-level. The raise of the labor cost in turn reduces employment and production. The use by incumbent firms of labor market institutions to reduce the returns of innovations decreases the overall national research effort, and so the GDP growth.

Secondly, I focus on potential entrants. I assume that their innovative process is similar to the one of incumbent firms. In addition, in order to correspond to empirical evidences (see Earle and Sakova (1999)), I assume that the size of the cohort of potential entrants is positively correlated with the returns of innovations. Those two elements imply that the total investments made in R&D by potential entrants are more sensitive to the reward of innovation than those of incumbent firms. Consequently, the share of new entrants is lower when the wage is negotiated at the industry-level, compared to the situation where it’s negotiated at the firm level. At the equilibrium, this lower share of entrants leads to a situation where the distribution of firms size is more skewed. Indeed, the proportion of large firms increases. As a consequence, the rent-sharing between negotiating firms and their workers contributes to foster the domination of very large firms. This impact on the distribution of firms size has, to the best of my knowledge, never been highlighted. Due to this force, which fosters the domination of large firms, the economy departs from the situation of perfect competition.

In the second part of this paper, I assess numerically the magnitude of the previous effects by calibrating the model to the Danish economy. This country is chosen because Lentz and Mortensen (2008) estimated the value of several parameters used in the model on Danish data. I first estimate the significance of the effect on the negotiated wage. I find that the wage surplus generated is important and equals to 2.8% which, in turn, reduces employment by 6.2% and production by 4.8%. Then, I estimate the effect on endogenous variables related to growth. I find that the effect is less significant, as the reduction of growth when the wage is negotiated at the industry-level is estimated as being equal to 2.4%.

#### The plan gets exploited to entrench existing monopolies and create new ones.

Buccella ’25 [Domenico and Luciano Fanti; April 19; Professor, Kozminski University, Department of Economics; Department of Economics, University of Pisa; The Indian Journal of Labour Economics; “Bargaining Agendas as Strategic Tools,” vol. 68]

The scope of bargaining and the choice of the negotiation agenda are pivotal subjects in labour–management relations and negotiations, and thus for the functioning of labour market institutions in the most advanced economies. In countries with organized labour, an analysis of the choice of the negotiation agenda at company level in already active union–firm units is therefore relevant because: (1) it can affect the pattern of bargaining in several industries. In fact, the pattern company, which is usually the incumbent one, plays a leading role in the sector and shapes negotiations in other companies. In such cases, pattern bargaining represents a mechanism for the coordination of collective bargaining within a sector in which there is no multi-employer collective bargaining (Eurofound 2019); and (2) as the literature has shown, the bargaining agenda and its scope and timing can be used as a tool to maintain dominant positions. Given that decentralized negotiations are common in several OECD countries (see, e.g., Buccella 2018), consideration for the strategic use of bargaining arrangements can be of relevance when designing labour and industrial policies. In the present work, we focus the analysis on the bargaining models most frequently discussed in the economic literature, and empirically observed in real word: the right-to-manage (RTM) and efficient bargaining (EB) models.

This analysis is relevant because of practical consequences. Chappell et al. (1992) empirically find that, in general, unionization has a market entry deterrence impact in the US industries. Focussing precisely on bargaining agendas, Bughin (1999) collects data for several Belgian industries and shows that the way to conduct negotiations can be an entry deterrence instrument in a unionized oligopoly with firm-specific unions. Therefore, not only the presence of labour unions, but also how management conducts negotiations with them, can affect the market structure of an industry. As a consequence, incumbent firms’ management can use/exploit labour market regulations to create (or maintain) dominant positions, with direct implications for regulatory and competitive policies.

A recent exemplifying case of the use of the bargaining agenda as a deterrence tool is that of AT&T Mobility in the US telecommunications industry. In 2004, the company, formerly Cingular Wireless, acquired the old AT&T Wireless. During company-level negotiations, the Communications Workers of America, the largest union in that industry, obtained the possibility of acquiring the membership of 16,500 former AT&T workers at retail stores and call centres nationwide since July 2005. The data show that, in the following years, AT&T Mobility market shares grew from 2011 to 2018 by roughly 7.5 per cent. During this period, operators such as Leap Wireless and Metro PCS exited the market and, in the meantime, no other firms entered (for a detailed account, see Buccella & Fanti 2020).

The primary results of the paper are as follows. The timing of the negotiation, the potential entry and its mode, as well as the restrictions on bargaining are fundamental elements to determine the equilibrium agenda in decentralized labour–management bargaining units. If firms have the power to choose strategically the bargaining agenda, then RTM emerges more frequently in equilibrium under different configurations of the timing of negotiations; however, this occurs in conflict of interest with their decentralized unions. On the other hand, the EB is the predominant equilibrium arising in pure strategies when the labour–management bargaining parties agree on (have a common interest towards) the negotiation agenda; nonetheless, in the circumscribed situation, the RTM can also emerge as the agreed-upon agenda as well. Furthermore, the incumbent union–firm unit can strategically agree to use the EB agenda as an entry deterrence tool.

### Link---Sectoral Bargaining---AT: Link Turn---2NC

#### Union-driven wage increases are a cost-raising strategy that pushes out competition and deters market entry.

Bachmann ’12 [Ronald, Thomas K. Bauer, and Hanna Kröger; April 2012; PhD, labour economist at the RWI Leibniz Institute for Economic Research in Essen, Germany; doctorate economics, professor of economics at the University of Bochum; economist at RWI; Ruhr Economic Papers, “Minimum Wages as a Barrier to Entry: Evidence from Germany,” #329, http://dx.doi.org/10.4419/86788378]

The possibility of raising rivals’ costs through minimum wages critically hinges upon the condition that all firms can be forced to pay the higher, entry-preventing wage. In this regard, the German labour market offers an interesting opportunity to directly study the link between minimum wages and product market competition, because minimum wages in Germany are introduced at the industry level at the initiative of employers and trade unions by declaring collective bargaining agreements as generally binding. This way of introducing minimum wages also exists in a number of other industrialized countries such as France, the Netherlands and Portugal. The results of our study are thus of general interest for the analysis of cost-raising strategies to influence the degree of competition in an industry.

To the best of our knowledge, this is the first empirical analysis of employers’ attitude towards the introduction of minimum wages. We use a unique data set covering 800 firms from eight different service sectors in Germany, where a minimum wage introduction was being discussed at the time of the survey. Our analysis explores the determinants of supporting or opposing the introduction of a minimum wage paying particular attention to the role of product market competition. Furthermore, we scrutinize the institutional features of the labour market that are associated with firms’ support of minimum wages.

The results of our analysis have several important implications. First, a cartel in favour of minimum wages may not only reduce the number of firms operating in the market, but also the number of employees. This can be seen as an alternative mechanism through which minimum wages are potentially harmful to employment. Second, the monopolistic rents achieved on the product market by the surviving firms are paid by the consumers, which potentially reduces social welfare. Third, our results also apply to many other countries with similar institutional features. The incentive of firms’ and workers’ associations in the more prosperous countries of the European Union to collude in order to introduce minimum wages may increase further as migration from poorer (mainly Eastern European) EU Member States becomes more important. Firms’ support of minimum wages can thus been viewed as a showcase example for how social policies in Western Europe may act as protectionist instruments against competition from low-wage countries.

The remainder of this paper is structured as follows. Section 2 briefly reviews the institutional background with respect to minimum wages in Germany. We present the relevant economic theory in Section 3. The empirical strategy and the data are described in Section 4. The empirical results are presented in section 5. The final section summarizes and concludes the discussion.

<<TEXT CONDENSED, NONE OMITTED. OBVIOUSLY>>

2 Institutional Background Germany is one of the few European countries without statutory minimum wages. This has remained broadly unquestioned for several decades, because high coverage rates of collective bargaining provided an effective floor for wages. However, since the beginning of the 1990s, union density as well as coverage have been decreasing continuously (Kohaut and Ellguth, 2008). This development coincided with an increase in wage inequality, especially at the bottom of the wage distribution (Dustmann, Ludsteck, and Sch¨onberg, 2009), although it is not clear whether the decline in collective bargaining has been a causal factor in this context (Antonczyk, Fitzenberger, and Sommerfeld, 2010). At the same time, the completion of the EU’s Single Market progressed in terms of both increased intra-EU trade and labour mobility. This led to a rise in the number of posted, low-wage workers in the German construction industry during the 1990s, which was perceived as a threat to the employment prospects of German workers and eventually lead to the introduction of minimum wages in this industry in 1997. Thus, the main motive for the introduction of minimum wages in this sector was protectionist, i.e. the aim was to shield the German construction industry from low-wage competition (Woolfson and Sommers, 2006). The issue of increased competition in the service sector gained further importance in 2006 when the European Union passed the Service Directive, also referred to as ‘Bolkestein Directive’, which aimed at enhancing the free movement of services already agreed upon in the Treaty of Rome as one of the four freedoms of the EU’s Single Market (Menz, 2010). The Service Directive intends to lower the regulatory barriers between countries which prevent the provision of services in another EU Member State. Indeed, Kox and Lejour (2006) argue that policy heterogeneity is the main obstacle to intra-EU trade in services and to the possibility to open an establishment in another EU country. Next to the actual increase in competition caused by the Service Directive, the intense public discussion of the directive’s first draft may have influenced the perception of lowwage, competitive threats from the new Member States. The Service Directive’s first draft intended to apply the ‘country of origin principle (COP)’ to the temporary provision of services abroad, which specifies that workers in the host country are subject to the laws and regulations of the home country. This applies to social policy and labour market regulation, including collectively bargained wage rates and minimum wages. Saint-Paul (2007) argues that the COP makes personal services tradable in the sense that the service can be bought in any EU Member State and the travelling cost for the worker performing the service constitutes a special type of transportation cost. The COP has been heavily criticized in high-wage countries such as Germany by both employer associations and trade unions, as it was perceived as a threat to employment, wages and working conditions of German workers. As a consequence, the social partners as well as the German government have agreed upon extending minimum wages beyond the main construction industry (Menz, 2010). The legal background for any minimum wage in Germany, the Posting of Workers Law, constitutes the national implementation of an EU directive which provides the framework for the temporary exchange of labour between EU Member States. The contribution of this law is twofold. First, it allows the extension of collective agreements to all firms and workers in an industry, independently of their membership in an employer association or a trade union. Such an extension amounts effectively to the introduction of a collectively bargained minimum wage at the industry level. Second, the Posting of Workers Law stipulates that minimum working standards, including minimum wages, must apply to domestic and foreign workers alike. Note that extensions of collective agreements, partly in addition to minimum wages, are not uncommon in the European Union. According to Kerckhofs (2011) such extensions are frequently used in Belgium, the Czech Republic, Finland, France, the Netherlands, and Portugal, although the exact mechanisms differ. In Spain, collectively agreed wage rates automatically apply to all workers in an industry by law. Therefore, our analysis does not only apply to Germany, but to all countries with a tradition in the extension of collective agreements. Another important aspect of the Posting of Workers Law in Germany is that it specifies strict requirements for a collective agreement to be declared generally binding. First, the initial collective agreement must be representative, implying that no additional collective agreement exists in the respective industry that covers more workers or union members. Second, the extension of the collective agreement should be in the public interest. Third, the social partners need to apply jointly for an extension, which requires a high degree of consensus. If these conditions are met, the Federal Ministry of Labour and Social Affairs usually declares the collective agreement generally binding without consulting any additional governmental bodies or institutions. Only when the application is filed for the first time, a committee consisting of three representatives of the respective trade union and employer association has to give its consent. The Posting of Workers Law was adopted in 1996 and applied for the first time in 1997 in the German construction industry. Even though additional industries have been included since then, minimum wages up to now do not exist in the majority of sectors.1 However, against the background of the decline in union density and coverage, the increase in wage inequality, and the introduction of the Service Directive, the political pressure to extend minimum wage legislation has grown further during the last few years. Given that minimum wages in Germany are introduced at the industry level, it is conceivable that they may be used as an instrument to influence the degree of competition in an industry.

3 Theoretical Considerations

Traditional labour market theory, such as the Marshallian or the monopsonistic models of the labour market, does not offer an explanation for the observation that some firms are in favour of minimum wages. By contrast, the industrial organization literature explicitly models the link between unionization and cost raising strategies in order to deter entry and/or push existing competitors out of the market. From this point of view, minimum wages increase competitors’ labour costs, which may explain employers’ support for minimum wages.

The idea that cost-raising strategies can be used to decrease competition on the product market originates from the industrial organization literature (Salop and Scheffman, 1983, 1987). There, the focus is on activities by individual firms such as inducing suppliers to discriminate against competitors, controlling exclusive distribution channels, lobbying for product standards or government regulation, as well as advertising and R&D races. However, cost-raising strategies can also become effective through the labour market.

The first type of model in this vein is based on the insider-outsider theory in terms of wage setting (Gollier, 1991, Ishiguro and Zhao, 2009). If outsiders, i.e. unemployed workers, are not unionized, they can be hired at a lower cost compared to insiders. This will stimulate low-cost firms to enter the market. Incumbent employers may therefore be interested in raising the wages of outsiders, thereby increasing product prices and restricting industry output. Insiders are also motivated to increase wages of outsiders in order to secure themselves against becoming unemployed. Furthermore, the increased price on the product market legitimates insiders’ wage premium. Thus, (unionized) insiders and employers form a coalition to increase wages for outsiders. This behaviour discourages market entry of new firms. Chappell, Kimenyi, and Mayer (1992) deliver one of the few empirical studies on this topic. Using US data they show that a higher degree of unionization in an industry is indeed associated with entry deterrence.

#### The link is proven by history and destroys the case.

Hafiz ’21 [Hiba; 2021; JD, PhD, Assistant Professor of Law at Boston College Law School; Michigan Law Review, “Structural Labor Rights,” vol. 119]

While these proposals are rich and fruitful, they face significant challenges. The first is political: congressional inability or unwillingness to amend current labor law is well documented.42 And other Democratic agenda items—healthcare, immigration, and climate-change reforms—will likely take priority over labor law reform, exhausting limited political capital Democrats can expend if elected.43 Second, sectoral bargaining and antipoverty programs are only as effective as the governmental and labor market institutions that enforce them.44 Those institutions consist most importantly of unions and other worker-led organizations, whose strength turns on the protections and remedies substantive labor law affords them.45 Thus, while empirical evidence suggests that broad collective bargaining coverage strengthens worker bargaining power and reduces wage inequality in other countries, those results are highly correlated with much higher union-density rates, stronger labor-market institutions, and robust labor law protections.46 In other words, without institutions and protections ensuring workers’ equal bargaining power with employers, sectoral bargaining may not strengthen and may even weaken unionization rates.47 Indeed, the history of sectoral bargaining in the United States without strong unions—under National Industrial Recovery Act (NIRA) labor boards and current state-level wage boards—is characterized by weak enforcement and political overrides of high wage demands.48 That history also instructs that, without equalizing bargaining power, sectoral bargaining can facilitate employer collusion in labor and product markets at the expense of workers and consumers.49 So labor law’s ability to regulate workers’ relative bargaining power is and will continue to be a necessary component of any successful labor-market regulation scheme.

### Impact---Cyber---AT: Defense---2NC

#### Escalation risk is increasing---AI, misperception, and adversary boldness.

Harding ’24 [Emily; January 28; MA, director of the Intelligence, National Security, and Technology Program at the Center for Strategic and International Studies; Lawfare, "The United States Needs a New Way to Think About Cyber," https://www.lawfaremedia.org/article/the-united-states-needs-a-new-way-to-think-about-cyber]

However, the theory of deescalatory cyber depends on certain assumptions that may be increasingly tenuous. First, the speed: AI-enabled cyber offense and defense will dramatically accelerate the process of finding and exploiting vulnerabilities. Second, espionage and sabotage look remarkably similar from a network administrator’s perspective. Misinterpreting intent can lead to vast under- or overreaction. Finally, states such as Iran and China have gotten bolder in their targeting. An attack on a water plant is certainly a massive step up from a spiteful hit on a casino’s computers—and far more likely to lead to death, which leads to escalation.

Everyone would be better off if cyber operations stayed in the realm of nonviolent, nonescalatory activity. Nations have always needed a way to signal disapproval and spar with each other without coming to blows. But there is no largely agreed-upon code of conduct in the cyber domain, like keeping hands off of critical infrastructure. Attacks like Iran’s and China’s should be viewed as part of a dangerous new phase in cyberwarfare. The U.S. government needs to establish a new framework for conceptualizing and responding to these kinds of attacks.

#### 21 scenarios for extinction---dropping one makes it try-or-die. AND, irrationality magnifies the impact.

Lindsay ’22 [Jon R.; June 1; PhD, Associate Professor at the School of Cybersecurity and Privacy and the Sam Nunn School of International Affairs at the Georgia Institute of Technology; Nuclear Command, Control, and Communications: A Primer on US Systems and Future Challenges, “Cyber Operations and Nuclear Escalation: A Dangerous Gamble,” Ch. 6]

TWENTY-ONE WAYS TO DIE

The combination of offensive cyber operations and nuclear weapons creates many different pathways for escalation, which imperils strategic stability. Strategic stability in this context refers to the marginal risk of the outbreak of nuclear war or escalation of a war to a higher level of intensity as a result of cyber-nuclear interactions.24

Table 6.5 lists twenty-one different ways in which cyber operations can exacerbate the risks of nuclear escalation. The columns distinguish these mechanisms by the time period when they are most salient (peace, crisis, or war). The rows distinguish them by the actor responsible for the decision to escalate the use of nuclear weapons, which may or may not be the same actor that makes the decision to conduct cyber operations. Those that involve rational incentives to escalate, as contrasted with subrational psychology, are indicated with an asterisk. Space constraints preclude a detailed analysis of the risks and likelihood of each pathway, but this conjectural summary is at least suggestive of the multiple and potentially interacting routes to escalation inherent in cyber-nuclear operations. The pathways to Armageddon could be multiplied indefinitely by combining these mechanisms with each other and focusing on effects in specific segments of the nuclear enterprise. No claim is implied here that these mechanisms constitute a mutually exclusive or collectively exhaustive typology. I highlight twenty-one of them simply to underscore the uncertainty and luck involved in any cyber-nuclear gamble.

TABLE 6.5. Cyber-Nuclear Escalation Mechanisms by Actor and Timing

|  |  |  |  |
| --- | --- | --- | --- |
| Actor | Peace | Crisis | War |
| The cyberattacker escalates with nuclear weapons | 1. Surprise nuclear first strike uses cyber operations to [shut down] paralyze NC3: "cyber bolt from the blue" | 2. Reliance on secrecy that cannot be revealed for coercion: "the cyber commitment problem"\*  3. Overconfidence in cyber counterforce capability | 4. Closing window of cyber effectiveness due to the invalidation of planning assumptions caused by damage or wartime reserve modes\* |
| Either the cyberattacker or target escalates | 5. Accidental launch due to mishap or malfunction in NC3 computers | 6. Information overload, panic, and confused decision-making resulting from system failure: "fog of cyberwar"  7. Closing window for damage limitation: "first-move advantage"\* | 8. Nuclear retaliation in response to a massive cyberattack  9. Deliberate launch of nuclear weapons, hitting the wrong targets |
| The target of cyberattack escalates | 10. Inability to distinguish cyberattacks from intelligence probes ("the cybersecurity dilemma")  11. Compromised preventative attack heightens resolve of nuclear proliferator  12. Capitulation in a prior cyber-nuclear crisis results in improved capability or resolve next time | 13. Cyber activity creates false early-warning indications that pressure target to launch  14. Target misattributes source of cyberattack and mistakenly retaliates  15. Compromised cyber preemption heightens target hostility or resolve encouraged by a third party | 16. Closing window for retaliation due to attacks on nuclear forces / NC3: "use it or lose it"  17. Closing window for nuclear use due to attacks on dual-use C3I during a conventional war: "entanglement"  18. Escalating during a losing war in hopes of favorable terms: "gambling for resurrection" |
| Nuclear escalation encouraged by third party | 19. Deliberate but unauthorized launch by an insider threat or external hacker  20. Cyberattack masquerading as third party to prompt retaliation: "false flag"  21. Chronic disinformation and influence operations distort planning and assessment, creating a crisis-prone environment | | |

Note: C3I=command, control, communications, and intelligence; NC3 = nuclear command, control, and communications.

\*Rational incentives to escalate.

The risks of breakdown in complex systems and human confusion in the fog of war have received the lion’s share of attention in the literature on organizational reliability. NC3 architects 25 are generally familiar with these sorts of risks even if they have not, or ultimately cannot, eliminate them completely. Because NC3 systems interface directly with human decision-makers, degradation of NC3 under cyberattack carries the potential to degrade the quality of decision making. This might be described as “the fog of cyber war” (scenario 6). Cyberattacks might degrade the quality of incoming warning data and reports from operational units and outgoing requests for information and instructions to units. Time pressure, fear, panic, exhaustion, and organizational politics—fog and friction—can all degrade the quality of decision-making in crisis or war. Most analysis of cyber-nuclear risk falls into this general category. A variant of this 26 27 problem might emerge not from cyberattacks on NC3 per se but on the intelligence and assessment functions, perhaps even including social media manipulation that contributes to a climate of hostility and mistrust (scenario 21), which might complicate assessment of the nature and stakes of the crisis. The fog of war in cyberspace can surely be an exacerbating factor in many of the other scenarios.

It is important to appreciate that some version of subrational or bounded rational thinking is usually invoked in typical crisis-escalation scenarios that stress the potential for misperception, miscalculation, and error. Indeed, many of the scenarios listed in table 6.5 involve some deviation from strictly rational utility maximization. Actors may be risk averse for gains and risk accepting for losses. They may think “hot” or emotionally under pressure. They may use heuristics and “thin slice” rather than gather or use all the information available. Bounded rational thinking has been demonstrated in experiments and found to be relevant in historical case studies. How decision 28 makers react to the information revealed depends on assumptions about rationality.

Indeed, only three scenarios in table 6.5 feature fully rational incentives, marked with an asterisk. It is possible that cooler heads and more rational thinkers might avoid disaster in the other eighteen scenarios. For instance, as systems begin malfunctioning, and as it becomes obvious that the enemy has launched a cyberattack degrading NC3 reliability, a rational victim might realize that the balance of power is no longer favorable. A rational victim experiencing a degrading cyberattack might thus be willing to compromise short of war. The three rationalist mechanisms are thus in some ways more concerning. Less appreciated than the fog of cyberwar but in some ways more worrisome is the potential for rational miscalculation that results from strategic information asymmetries created by cyber operations. Reliance on pervasive digital computer networks can increase the complexity of the system, which increases intrinsic operational uncertainty. More problematically, hackers must rely on stealth and deception to exploit NC3, which increases strategic information asymmetry. Anything that contributes to information asymmetry regarding the balance of power and resolve is a potential source for bargaining failure or war.29

In the “cyber commitment problem” (scenario 2), for example, the enemy attack on NC3 can never be revealed to the target in advance because its effectiveness depends on secrecy. Effective 30 deterrence requires an actor to reveal its willingness and capacity to punish the target under some particular circumstances. Deterrence, as well as negotiated settlements to crises that restore deterrence, depend on common knowledge about the balance of power, mutual interests, and the expected costs and outcomes of war. Unfortunately, a cyberattack that disables NC3 cannot be revealed to the target for coercion before or during a crisis since the target could take steps to disarm the intrusion. Thus, the target stands fast, believing it can win a contest of brinksmanship, and the attacker also stands fast, believing it can win a counterforce exchange. Eventually the attacker decides that war is inevitable and moves to preempt or limit damage with a combination of cyber and nuclear means.

The other two plausibly rationalist mechanisms in table 6.5 involve closing windows of opportunity. Since cyber operations targeting NC3 depend on careful planning and detailed intelligence, circumstances that threaten to undermine the conditions for their effectiveness are particularly worrisome. Even if the cyber information asymmetry is not implicated in the initiation of a nuclear war, the closing window of cyber viability (scenario 4) creates rational pressures to use capabilities while they are still available for counterforce or damage limitation. On the other side, an actor may calculate that a rival known to have advanced cyber capabilities will begin to initiate counterforce attacks and rush to launch damage-limitation strikes while NC3 is still viable (scenario 7), even if the forces themselves are not at risk. This is akin to the classic scenario described by Thomas Schelling where both sides rush to execute a disarming first strike.

Additional window mechanisms can be activated by more bounded rational thinking. For instance, cyberattacks on networks that are used for both conventional C3 and NC3 might be attacked in a conventional war for conventional benefits. However, the (nuclear-conventional) “entangled” target becomes worried that these attacks are actually preparatory to nuclear war (misinterpreted warning, scenario 13) or are degrading the usability of nuclear forces (“use it or lose it,” scenario 16) or are degrading the opportunity to attack enemy nuclear forces if needed (damage limitation window, scenario 7).31

### Impact---Cyber---Retaliation---2NC

#### The retaliation goes nuclear even if the cyber-attacks don’t.

Klare ’19 [Michael T.; November 2019; PhD, professor emeritus of peace and world security studies at Hampshire College; Arms Control Today, "Cyber Battles, Nuclear Outcomes? Dangerous New Pathways to Escalation," https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation]

Yet another pathway to escalation could arise from a cascading series of cyberstrikes and counterstrikes against vital national infrastructure rather than on military targets. All major powers, along with Iran and North Korea, have developed and deployed cyberweapons designed to disrupt and destroy major elements of an adversary’s key economic systems, such as power grids, financial systems, and transportation networks. As noted, Russia has infiltrated the U.S. electrical grid, and it is widely believed that the United States has done the same in Russia.12 The Pentagon has also devised a plan known as “Nitro Zeus,” intended to immobilize the entire Iranian economy and so force it to capitulate to U.S. demands or, if that approach failed, to pave the way for a crippling air and missile attack.13

The danger here is that economic attacks of this sort, if undertaken during a period of tension and crisis, could lead to an escalating series of tit-for-tat attacks against ever more vital elements of an adversary’s critical infrastructure, producing widespread chaos and harm and eventually leading one side to initiate kinetic attacks on critical military targets, risking the slippery slope to nuclear conflict. For example, a Russian cyberattack on the U.S. power grid could trigger U.S. attacks on Russian energy and financial systems, causing widespread disorder in both countries and generating an impulse for even more devastating attacks. At some point, such attacks “could lead to major conflict and possibly nuclear war.”14

## Case

### Hegemony---1NC

#### No hegemony impact.

Bandow ’23 [Doug; November 20; Senior Fellow, J.D. from Stanford Law School, Former Vice President of Policy at Citizen Outreach; CATO, “Washington’s pursuit of hegemony undermines American security,” https://www.cato.org/commentary/washingtons-pursuit-hegemony-undermines-american-security]

Europe approaches the second anniversary of a war in which the U.S. is deeply involved, openly battling a nuclear‐​armed power via proxy. Long‐​standing Middle Eastern antagonisms highlighted by Israel’s increasingly oppressive rule over millions of Palestinians exploded. In this fight the administration heedlessly intervened, deploying the fleet for political effect while leaving American personnel under attack across Iraq and Syria.

Washington continued to intensify military operations near China while planning for a possible conflict over Taiwan, even as Beijing expands its nuclear force. The U.S. is tightening its alliance with South Korea while Pyongyang is enlarging its nuclear arsenal and developing ICBMs to carry those nukes to the American homeland.

The greater the danger, the more delusional Washington’s analysis seems to be. The presumed problem is always that the U.S. is not doing enough. For instance, insisted the Hudson Institute’s Nadia Schadlow: “Chaos is spreading throughout the world as a direct consequence of America’s failure to deter Russia, Iran and China. The balance of power in key regions is faltering, leading to instability and global disorder. Like it or not, the U.S. is the only force that can restore equilibrium.”

If only Washington got serious in telling everyone else what to do, all would be well. The bad guys would fall into line. The lion would lie down with the lamb. The world’s peoples would hold hands, singing “Kumbaya” around a really big international bonfire. We all would live happily ever after.

In fact, Americans feel buffeted by global events mostly because their government constantly intervenes. The world is a mess, but it still doesn’t pose much threat to the United States—its territory, people, fundamental liberties, and constitutional system. The only serious danger to America today is a nuclear assault from Russia or China; yet such an attack would result in either nation’s destruction.

The violence that Schadlow cites is occurring away from the U.S., mostly far away. That doesn’t make it unimportant or of no concern. Nevertheless, nothing Russia, Iran, or China is doing threatens a vital American interest and warrants war. The U.S. should stay out of rather than jump into such conflicts.

For instance, Ukraine, although caught in a tragedy, is unimportant strategically. From the original colonies’ fight for independence until the Soviet Union’s break‐​up, that territory was ruled by Moscow. Never did American policymakers imagine risking war to stage a rescue. The Middle East continues to decline in importance, while Tehran is a military midget with no ability to reach any Americans other than those unwisely placed within its reach by the likes of the former Ambassador James Jeffrey, who admitted misleading President Trump to keep the U.S. dangerously entangled in Syria. The People’s Republic of China is focused on expanding its influence in its own neighborhood, not imposing its will on the U.S. In contrast, Washington is determined to enforce its hegemony most everywhere irrespective of cost.

Of course, American policymakers ritualistically promote the “rules‐​based international order,” but the concept is a pious fraud—a set of standards created for Washington’s benefit which it breaks whenever convenient, which is often. No other nation sanctions, drones, bombs, invades, and occupies other countries more frequently. After all, that is what the self‐​proclaimed guardian of the rules‐​based international order must do!

No doubt, the regimes in Moscow, Tehran, and Beijing are malign. However, U.S. policymakers have never let murderous dictatorships stop them from forming “beautiful friendships.” Consider Iran’s Shah Mohammad Reza Pahlavi, whose brutality brought today’s Islamists to power. American officials even urged the Iranian military to be more ruthless, “to kill as many demonstrators as necessary to keep the shah in power.” Now the Biden administration has proposed turning American military personnel into bodyguards for the Saudi royals, who slaughter foreign civilians and murder domestic critics with equal avidity. Indeed, most of Washington’s Mideast clients tilt authoritarian.

Moreover, American conduct has done much to make antagonists hostile. For instance, despite having been with the KGB, Vladimir Putin demonstrated no animus to America early in his rule. He was the first foreign leader to call President George W. Bush after 9/11 and late gave a conciliatory speech to the German Bundestag. However, Putin’s tone was far different in in his 2007 address to the Munich Security Conference, in which he pointed to the allies’ broken promises over NATO expansion and aggressive assaults on Russian security interests. Now Washington is waging a proxy war‐​plus against Moscow. Yet members of the infamous Blob express shock that Russia has allied itself with China, Iran, and North Korea.

Of course, Washington’s counterproductive policies don’t excuse other governments’ misconduct. What if the danger increases? Schadlow complains that “Since the mid‐​2000s the U.S. and its allies have forgotten the central goal of geopolitics: to maintain the balance of military power and thereby deter revisionist powers in critical regions.” Yet the best way for Washington to limit threats against the U.S. would be to abandon its attempt to control events up to every other state’s border—and sometimes beyond. It is one thing to prevent other nations from dominating critical regions. It is quite another to impose its will there instead.

Washington’s chief strategy should be to help friendly states protect themselves. After the Cold War ended, American policymakers should have promoted new power balances that did not rely on the U.S. military. Americans would be more secure if its allies took on roles commensurate with their capabilities. In Europe and the Middle East, at least, Washington’s presence is not necessary to deter adverse military action. Even in Asia friendly states are capable of exacting a very high price for any Chinese aggression.

Yet Europe’s dependence continues nearly eight decades after the conclusion of World War II, even though NATO’s European members possess a larger collective population and economy than Russia. As the alliance incorporated the former Warsaw Pact nations, Europeans continued to wail and whine about the threat posed by Moscow, insisting that America do more, ever more, on their behalf. Now, with war raging in Ukraine, European governments are still determined to rely on the U.S., seemingly forever.

Schadlow complains that Washington did not deter Russia’s invasion of Ukraine. But the U.S. never purported to do so. In Europe Washington protects nations by including them in NATO. The U.S., and its European allies, refused to add Kiev because they were not willing to fight for it. Hence Moscow was not deterred from invading Ukraine.

However, this doesn’t mean Russia is prepared to attack other European states. First, Moscow has shown no interest in further aggression. Second, the bloody war in Ukraine demonstrates that Russia could not conquer multiple European countries, let alone the continent, if it wanted to do so. Third, nothing suggests that Washington would not fulfill its treaty obligations to other European states, however improvident the offer and difficult the task. Fourth, and most important, the Europeans can afford to do whatever they believe to be necessary for their defense.

As for the Middle East, nothing there is worth protecting by America. The international oil market has diversified, the U.S. has become the globe’s leading energy producer, and successor governments would have little choice but to sell their resources. Moreover, Washington could significantly increase oil supplies by dropping counterproductive sanctions on producing nations.

Israel is a regional superpower well able to defend itself and doesn’t need U.S. support. The greatest threat to Israel is internal, its inability to remain democratic while enforcing military rule over millions of Palestinians. Moreover, its mistreatment of the latter has helped turn Americans into terrorist targets. Perhaps worst is the collective kowtow of successive U.S. administrations to the Saudi royals, a tyrannical medieval throwback to absolute monarchy. The best news of late is not the Abrahamic accords, which reinforce all parties’ worst tendencies, but the modest détente between Tehran and Riyadh, which occurred despite, not because, of Washington’s efforts.

Although the People’s Republic of China dominates East Asia, it is no colossus, suffering from slowing growth, economic weakness, demographic decline, political uncertainty, and regional animosity. Indeed, over the last century Beijing has been at war with Russia, Japan, India, Korea, and Vietnam. Its neighbors should mimic China’s military strategy versus the U.S., one of anti‐​access/​area denial, or A2/AD.

Most important, Taiwan should seek to lower tensions by prolonging the ambiguous status quo while preparing to exact a high price against any Chinese attempt to invade. Other nations in the region, which have consistently underinvested in defense, should also do more militarily, working together rather than expecting the U.S. to be ever on station. Especially South Korea, with more than 50 times the GDP and twice the population of the North, and Japan, which for decades has limited its defense outlays.

Schadlow wants the U.S. “to restore balance in the world.” The right global balance of power would not treat America as the world’s defender of last resort. Rather, the U.S. should offload defense responsibilities onto populous, prosperous allies, which heretofore have treated the Pentagon as a foreign welfare agency.

The U.S. should start by reducing its presence in Europe, allowing the Europeans to step up. Washington also should stop underwriting destructive behavior by Middle Eastern governments that foment conflict and spawn terrorism. Finally, American officials should help Asian states arm themselves for their own defense, while eschewing war over Taiwan and the gaggle of contested islands which provide the region’s primary flashpoints.

Washington’s primary duty is to keep America safe, not make other nations comfortable. With the world aflame it is time for Washington to formally drop any pretense of being Globocop. Uncle Sam’s first responsibility is the security and welfare of the American people.

#### US force projection fails because of geography and interest asymmetry---those same factors solve adversary expansion

McCallion ’24 [Christopher; May 23; M.S. at the London School of Economics and Political Science, Fellow at Defense Priorities; Defense Priorities, “Grand Strategy: Geography,” https://www.defensepriorities.org/explainers/grand-strategy-geography/]

The folly of pursuing global hegemony

After the collapse of the Soviet Union, the fundamental logic of U.S. grand strategy changed. Rather than seeking to maintain a balance of power in Eurasia, the United States endeavored to preserve its post-Cold War position of military primacy and to establish its hegemony on a global scale.29 The United States expanded its military commitments in Europe and Asia and established a new presence onshore in the Middle East, the latter leading to a string of ill-fated wars to reshape the region according to U.S. policymakers’ designs.30

The United States’ post-Cold War grand strategy leaned heavily on the assumption that U.S. technological supremacy (the “revolution in military affairs”) would allow it to occupy territory and populations in faraway parts of the world, without having to commit the resources that distant military endeavors normally demanded.31 To the extent that distance still blunted power projection, so it was argued, the United States would need to rely on its global archipelago of forward military bases.32 But even with unprecedented capabilities, the United States was forced to confront the limits of its military power. The post-9/11 wars in the Middle East proved to be not only costly but fruitless, thwarted by some of the least wealthy and powerful societies on the planet.33 Indeed, the relative costs of wars in the periphery seem to have risen conspicuously in recent decades.34

There are at least two salient reasons why U.S. military-technological supremacy failed to overcome geography. The first is that advances and diffusion of military technology benefit defense as well as offense, with the balance favoring the former the more distance increases. The second is the durability of local political-cultural identification, which as a shorthand can be called “nationalism.” Nationalism creates asymmetry between the interests of local populations, on the one hand, and the far more tenuous interests of the distant United States in their affairs, on the other.

The “strategic distance” over which the United States must project power has grown. Far more formidable than the Taliban or Iraqi insurgents, great or regional powers like China, Russia, and Iran can counter the United States at a lower cost in their own backyards, altering the costs and risks ratio for the United States to intervene in a local contingency. This is especially true if U.S. interests are conditional enough for it to not commit the full weight of its national resources to the fight. The United States’ grand strategy should be recalibrated to reflect a more rigorously prioritized set of interests and more modest expectations regarding the political outcomes that can be achieved by the use of U.S. military power abroad.

Geography and technology favor restraint

The limits to power projection overseas are a blessing in disguise for the United States. While strategic distance and the stopping power of water make it difficult for the United States to intervene across the oceans, they make it even more difficult for Eurasian great powers—or possibly even a hegemon—to threaten the United States. This is good news, since the latter condition removes the main security rationale for the United States to project power onto the Eurasian rimland in the first place. Moreover, the series of island chains which characterize East Asia and the West Pacific make it difficult for the United States’ most formidable competitor, China, to pursue hegemony within its own region, diminishing concerns that China might accumulate enough power through conquest to project overwhelming power outside its borders. Were the United States to scale back its forward military presence in Eurasia, it would appear to be less of a threat to others, and consequently others would appear less of a threat to it—a boon for U.S. peace and security.

Slim chances of a Eurasian hegemon

Neither China nor Russia is well-positioned to pursue concerted territorial expansion, let alone to achieve regional hegemony and project power into the Western Hemisphere.

In the near term, both face the problem that the current military-technological balance seems to favor defense, a condition that offense-defense theorists call “defense dominance.”35 This has been dramatically demonstrated by the war in Ukraine, where both sides have been able to blunt the other’s attempts at an offensive breakthrough by establishing defenses in depth. While a continued war of attrition may eventually wear down Ukrainian forces to the point that Russia can advance, so far the battle lines have barely changed since the beginning of the war, held fast by dense belts of mines, drones, and artillery.36

China’s security environment

Asia’s geography is not conducive to wars of conquest and defenders could make the costs of aggression high, especially those that are armed with nuclear weapons.

China, which is more powerful than Russia and a more plausible candidate for regional hegemony, also faces a more challenging geography with which to contend. Just as defense dominance provides an advantage to China against the United States in the West Pacific, it helps balance the scales between China and its weaker neighbors. The geography of East Asia is not conducive to territorial expansion, populated as it is by islands that would have to be taken by the kind of difficult amphibious operations described above.37 These states can also easily and rapidly acquire anti-access/area denial capabilities of their own, providing a capable defense of their home islands and preventing China from dominating the South China Sea.38 In order to secure oil imports from the Gulf, China’s ships must cross the Indian Ocean and a number of maritime chokepoints, putting them at risk of interdiction in a major conflict.39 China’s size also curses it with extensive land borders to worry about, including with regional powers like Russia to its north and India to its south.

In the Middle East, there is a rough equilibrium of power without the added U.S. presence.40 Not only is Iran balanced by its regional rivals, but global oil supplies are both difficult to critically disrupt and of declining importance given the growing number of alternative energy sources.41

Furthermore, it has been plausibly argued that the value of conquest as a source of cumulative power is diminishing, and that the nuclear revolution makes the threat from a regional hegemon irrelevant.42 While the United States may wish to hedge against overoptimism and avoid testing these propositions in practice, there remains a serious case that the prospect of a rival hegemon is more remote and less threatening than in prior eras, especially to distant nuclear-armed powers like the United States.

#### No China-Russia aggression and no US intervention if it happens.

Mueller ’25 [John; March 26; PhD Political Science, senior fellow at the Cato Institute and professor in the political science department at Ohio State University; Cato Institute, "Are We Spending Too Much on the U.S. Military?", https://www.cato.org/commentary/are-we-spending-too-much-us-military]

Not Worth the Cost?

Today, would-be budget cutters will find that the U.S. inflation-adjusted defense budget is back at record highs. Troops are committed at high numbers as well, with deployments to a large number of bases around the world where they have little to do. This is occurring despite the fact that any applications of U.S. military force are likely to follow the comparatively laid-back and cost-effective “by, with and through” approach. Concern of late has been impelled in particular by a militarized exaggeration of the threat presented by Russia’s foolish, opportunistic and wildly counterproductive invasion of Ukraine in 2022 and of the one presented by China, even though that threat is held to be primarily economic.

Thus far, the strategy that the U.S. (and its European allies) has applied to Ukraine essentially follows the “by, with and through” approach: supplying intelligence, training, financial and logistic support, and munitions. But there are no U.S. or allied boots on the ground, nor, for that matter, is there direct aerial bombing. The yearly cost for the American aid is the equivalent of about 5% of the U.S. defense budget.

However, there are concerns that, if a ceasefire is arranged, Russia will regroup and renew its attack on Ukraine and then perhaps expand to other countries in Europe. Little evidence for this popular proposition has been advanced, and it does seem unlikely that after the self-destructive failures of his military invasion, Vladimir Putin will try it again. (Moreover, at Russia’s 2024 rate of advance in Ukraine, it would take 116 years to take over the rest of the country.) But even if it does happen, the likely response will generally follow the “by, with and through” mentality, although now with countries that are better prepared to apply it.

A similar approach would likely be followed if China were eventually to use military force to try to take Taiwan—a feat that many consider to be exceedingly difficult. If the locals prove to be able to develop a coherent resistance, the U.S. military would likely seek to help, as in Ukraine, but not by sending in combat troops. This assessment suggests that U.S. defense expenditures, like the threats envisioned, continue to be much inflated.

### Inequality---1NC

#### Inequality is rock-bottom---flawed metrics influence contrary claims.

Waldenström ’25 [Daniel; May 19; Professor of Economics at the Research Institute of Industrial Economics Stockholm, Ph.D. in Economics from the Stockholm School of Economics, Ph.D. in Economic History from Lund University; Foreign Affairs, “The Inequality Myth: Western Societies Are Growing More Equal, Not Less,” https://www.foreignaffairs.com/united-states/inequality-myth-western-societies-more-equal-waldenstrom]

Spend a few minutes browsing political commentary or scrolling social media and you will discover a seemingly settled truth: inequality in the West is soaring, the middle class is being hollowed out, and democracies stand on the brink of oligarchy. The idea is seductive because it fits everyday anxieties in many Western countries—housing has grown increasingly unaffordable, billionaire wealth mushrooms unfathomably, and the pandemic exposed yawning gaps in social safety nets. Yet the most influential claims about inequality rest on selective readings of history and partial measurements of living standards. When the full balance sheet of modern economies is tallied—including taxes, transfers, pension entitlements, homeownership, and the fact that people move through income brackets across their lives—the story looks markedly different. Western societies are not nearly as unequal as many believe them to be.

This is not a call for complacency. Concentrated economic power can distort markets and politics; pockets of deep poverty persist in rich countries; and in the United States, the top of the distribution has indeed sprinted ahead of the rest. But focusing only on the eye-catching fortunes of tech founders or hedge-fund managers obscures a quieter, broader transformation: households across the income spectrum now own capital on a scale unimaginable to earlier generations, and basic measures of well-being in Western societies—including life expectancy, educational attainment, and consumption possibilities—have improved for nearly everyone.

Getting the facts right matters because bad diagnosis breeds bad prescriptions. If governments assume that capitalism is inexorably recreating the disparities of the Gilded Age, they will reach for wealth confiscations, price controls, or ever-larger public sectors funded by fragile tax bases. If, instead, the evidence shows that free-market economies have enriched middle classes by expanding asset ownership, that entrepreneurs’ fortunes are associated with advances shared with the broader public, and that much of the post-1980 rise in recorded inequality reflects methodological quirks, then a different agenda follows: states should encourage ambition, protect competition, widen access to wealth-building, and ensure that public services complement—not smother—private prosperity. In short, before treating inequality as an existential crisis, it is worth double-checking the thermometer.

THE TALE OF RUNAWAY INEQUALITY

The prevailing narrative about inequality—popularized by the economist Thomas Piketty in his bestselling 2014 book, Capital in the Twenty-First Century—depicts a U-shaped curve. In this view, the extreme concentration of income and wealth among a narrow elite in the early twentieth century was broken only by the world wars and taxes on capital. The turn toward market liberalization around 1980 unleashed a second wave of plutocracy. Charts of top-income shares appear to confirm the story: since 1980, the top one percent’s slice of pretax income has surged, especially in the United States and the United Kingdom. Add the proliferation of celebrity billionaires, the stagnation of median wages, and the eruption of high-profile corporate scandals, and the picture seems complete.

Three kinds of evidence underpin this interpretation. First are tax-return data that track pretax market income: salaries, dividends, and realized capital gains. These show widening gaps because high earners captured disproportionate gains from globalization and digital technology. Second are surveys of household wealth that measure who owns stocks and real estate; when asset prices boom, wealthy portfolios balloon. Third are particular statistics that make headlines—the many CEOs paid hundreds of times more than average workers, or the eight men who together are richer than half the world—and feed public outrage.

But such evidence has limits. Starting the clock in 1980 is rhetorically convenient because inequality was then unusually low, following decades of steep taxation and stringent regulation that had dampened entrepreneurship and curtailed many ambitious career paths. Today’s levels, although higher than those of the late 1970s, are far below those of the pre–World War II era when taxes were much lower than they are today. In addition, most estimates of income inequality have actually plateaued in the last two decades. Likewise, focusing on pretax income ignores the consequences of progressive taxation and, crucially, the vast public spending on health care, education, and pensions that disproportionately benefits lower- and middle-income households. Finally, wealth surveys often exclude mandatory pension assets and undercount owner-occupied housing—the two largest stores of middle-class wealth.

Recent work on U.S. income distribution by the tax economists Gerald Auten and David Splinter shows that correcting for underreported income at the bottom, income shifted into tax-deferred retirement accounts, and welfare transfers flattens the trend dramatically: in the United States, the top one percent’s share of after-tax income is only slightly higher today than it was in 1960, nowhere near the doubling implied by estimates presented by Piketty and his co-authors. Europe’s picture is flatter still, thanks to heavier redistribution and less winner-take-all compensation at the top of the corporate ladder.

A RISING TIDE

The canonical data tell only part of the story, and the least flattering part at that. A growing body of scholarship reassesses the long-run distribution of wealth by adding what earlier studies neglected. Three findings stand out.

First, private wealth has exploded—but so has broad ownership of it. Reconstructed national balance sheets for France, Germany, Spain, Sweden, the United Kingdom, and the United States show real per-adult wealth roughly tripling since 1980 and rising more than sevenfold since 1950. Crucially, an increasing share of that capital sits in the homes and pension funds of ordinary households. In 1900, assets held by the elite—agricultural domains and shares in industrial or financial corporations—dominated; today, residential property and funded retirement accounts represent the majority of private assets. That shift parallels mass homeownership: in most Western countries, 60 to 70 percent of households now own the roof over their heads—an equity stake unavailable to their great-grandparents. Most workers hold pension claims in mutual funds or index funds, granting them the high returns of stock markets at low risk—what amounts to financial democratization.

Second, wealth concentration has fallen—not risen—over the past century. In Europe, the top one percent now owns barely a third of the share it held in 1910, right before the beginning of the transformative era of world wars, democratization, and the growth of governmental capacity, and since the 1970s that share has been essentially flat, even as real wealth—that is, wealth adjusted for inflation—has tripled with rising asset prices. The United States shows a clearer uptick beginning in the 1970s, most visible among the spectacular fortunes of tech and finance titans, whose gains have outpaced even the impressive wealth growth of the middle class. Yet U.S. concentration remains closer to its 1960 level than to its pre-1914 peak. The dominant quantitative fact of the century, therefore, is not a new Gilded Age but a dramatic wealth equalization propelled by mass asset ownership.

<<CHARTS OMITTED>>

Third, the fact that people move through different income brackets over the course of their lives should temper typical measures of inequality. So, too, should the effects of welfare payments. Annual snapshots lump graduate students with retirees living off savings, making income and wealth gaps appear wider than lifetime consumption gaps. When studies in different countries instead follow individuals over time, they typically find that within only a few years, half the households in the bottom income decile have climbed to higher levels. Many top-decile households can drop to lower rungs of the ladder after business or investment setbacks. Government welfare programs further compress differences. In Sweden, when public pension entitlements are capitalized and added to assessments of personal wealth, this alone cuts the measured wealth inequality—known as the Gini coefficient—by almost half. In the United States, the market’s redistributive role is smaller, but when Social Security, Medicare, and employer-provided health insurance are treated as in-kind income, median households fare far better than raw wage data suggest.

These facts undermine the image of an inexorably widening chasm between a plutocratic elite and the rest. Yes, superstar entrepreneurs have amassed fortunes measured in tens of billions. But that outcome signals success, not failure: they furnished goods and services that millions freely bought. Their booming companies also supply jobs, higher wage earnings, and substantial tax revenue—directly through profits and payrolls and indirectly by raising the broader tax base. Over the past four decades, life expectancy in advanced economies (including in the United States despite the much-noted increase in “deaths of despair”) rose roughly six years, high school completion became nearly universal, and personal computers once reserved for elites went mainstream.

Those who typically bemoan the rise of inequality don’t correctly weigh the size and division of the pie. Rising real incomes and higher asset values are preconditions for mass prosperity and for a well-funded public sector. Even advocates of government intervention should champion efficient growth: every percentage point of GDP adds billions to tax revenue. The West’s most durable path to fairness, then, is to scale up the channels through which ordinary households acquire assets—including affordable housing supply, portable retirement accounts, and low-fee index funds—and to keep markets open so new firms can challenge incumbents.

### Turn---1NC

#### **Productivity is strong now. That delivers fast growth.**

Richardson ’25 [Nela; May 6; PhD economics, ADP’s Chief Economist and ESG Officer; ADP Research, “The power and puzzle of productivity,” https://www.adpresearch.com/the-power-and-puzzle-of-productivity/]

This week, all eyes will be on Federal Reserve policymakers and their decision to cut, raise, or stand pat on interest rates. But there’s another data point that could have an even greater impact on the economic and inflation outlook for 2025: productivity.

On May 8, the Bureau of Labor Statistics will deliver new data on productivity, which is defined as worker output per hour. In the fourth quarter of 2024, worker output increased 2.4 percent from the prior quarter while hours worked to produce that output rose only 0.8 percent.

Year-over-year, productivity was up 2 percent in the fourth quarter. For the full year, productivity rose 2.7 percent.

Apart from the pandemic-driven productivity spike of 2020, 2024 delivered the highest average productivity rate in 15 years.

Strong productivity delivers a host of benefits: faster economic growth, lower inflation, higher pay for workers, and greater profits for businesses.

Productivity puzzles

If 2025 productivity can maintain its 2024 strength, it would be a turning point for the U.S. economy. For more than a decade, the economy has been marked by lackluster productivity. Between 1989 and 2010, productivity averaged 2.4 percent a year. Since 2011, that annual average has fallen by a full percentage point, to 1.4 percent.

This recent slowdown has puzzled economists for two reasons. First, one key driver of productivity, spending on research and development, has been soaring. From 1989 to 2010, research and development spending grew an average of 2.8 percent a year. Since 2011, it’s grown by an average of 4.4 percent a year.

If the economy is spending more on research and development, why hasn’t innovation boosted productivity growth?

Productivity in manufacturing is a second mystery. From 1989 to 2010, manufacturing led U.S. productivity, with 3.7 percent average annual productivity growth. But since 2011, productivity in manufacturing has contracted to an annual average of 0.3 percent.

Manufacturing historically has been one of the most innovative parts of the economy. Yet for more than a decade, a chasm has opened between the development of new manufacturing technologies and output by manufacturing workers.

Productivity and pay

Another way to look at productivity is how much businesses pay workers to produce a unit of labor. In 2024, year-over-year worker pay grew by 4.1 percent, in line with historical trends.

This is where the math gets interesting.

If wages are growing at about the same rate as before, but productivity has fallen, the cost to produce a single unit of something will rise. And that’s exactly what’s happening.

Between 1989 and 2010, unit labor costs rose by an average of 1.5 percent a year, a rate consistent with the less-than 2 percent inflation we saw during those decades.

Since 2011, per-unit labor costs have risen by 2 percent a year on average. And even though 2024 put up strong productivity growth relative to its recent 15-year average, unit costs are still growing faster than they were.

My take

Turning points in the economy are notoriously hard to predict. But an economy that can withstand the uncertainty of inflation, tariffs, and consumer spending fatigue is one that can point to its strength in productivity.

#### Powerful unions suppress productivity growth through wage pressure, work restrictions, and investment disincentives.

Palagashvili ’25 [Liya and Revana Sharfuddin; May 7; PhD economics, senior research fellow and director of the Labor Policy Project at the Mercatus Center; MA development economics, predoctoral researcher at the Labor Policy Project at the Mercatus Center; Mercatus Center, “Do More Powerful Unions Generate Better Pro-Worker Outcomes?” https://www.mercatus.org/research/working-papers/do-more-powerful-unions-generate-better-pro-worker-outcomes]

Cost at the Firm Level: Productivity, Profits, and Investment

The costs unions impose on firms play out through three key channels: productivity, profitability, and investment. At their best, unions can boost productivity by fostering better communication between workers and management, reducing turnover, and creating incentives for efficiency. But more often, restrictive work rules and wage-setting above market rates stifle flexibility, dull incentives, and slow down adaptation. The result is lower profitability: Higher wages that don’t come with matching productivity gains can squeeze margins, limit reinvestment, and weaken firms’ ability to compete and grow. And when profits shrink, so does investment. Faced with rising labor costs, firms cut back on capital improvements, technology upgrades, and R&D, leaving them less competitive in the long run. In the end, while unions may secure short-term benefits for workers, their impact on firms often leads to the very job losses and stagnation they aim to prevent.

One of the key factors in assessing the overall cost of labor unions at the firm level is productivity. In their 1984 book Freeman and Medoff argue that labor unions tend to contribute to increased productivity, although the effect varies depending on the labor relations environment. Labor unions can raise productivity through an “employee morale channel,” by providing workers with a means of expressing discontent as an alternative to “exiting.” The labor unions open communication channels between workers and management, which induces managers to make changes to production methods and to adopt policies to improve efficiency. Open channels of communication also lower quit rates and improve labor relations within the firm. Freeman and Medoff argue that these productivity-enhancing effects can potentially offset the efficiency losses from greater unionization.

Recent research shows a different reality regarding how labor unions impact productivity. Aside from a few exceptions due to unique labor union arrangements, the impact of labor unions on productivity has been shown to be generally negative, mainly through the “investment channel.” That is, when unions set wages above the market rate—where wage determination becomes uncertain and disconnected from actual market conditions—both tangible and intangible investments can be reduced, ultimately hindering firm productivity.[63] In line with Freeman and Medoff's findings, more recent research continues to provide strong evidence that labor unions reduce firm profitability.[64] This decline is largely driven by labor-union-negotiated higher wages, which often lack matching productivity gains. As a result, firms face reduced profits, which limit their ability to invest in capital and R&D, which ultimately hinders long-term productivity growth.[65]

This is the ultimate dilemma for labor unions: The more what the labor union secures at the bargaining table is beyond what is reasonably sustainable, the lower the surplus of profits will be. Therefore, the more the labor union wins at the bargaining table, the more vulnerable the company is to long-term decline. As the company declines, there will be reduced work opportunities.

Besides increasing labor costs beyond what is reasonably justified, labor unions can also harm productivity through restrictive work rules, which include not only establishing inefficient staffing requirements (“featherbedding”), but also limiting incentives for worker effort and restricting management discretion on optimal staffing arrangements.[66] Negotiations over work intensity, or the pace of work, can further influence employment levels. Labor unions often press for reduced work intensity, which necessitates employing more workers but can also diminish overall productivity.[67]

Another example of how restrictive work rules can harm productivity is the case of the International Longshoremen’s Association (ILA), which in 2024 pushed for a total ban on port automation. Their intention was to protect jobs, but their demand would block critical productivity gains and prevent the kind of technology-driven human capital accumulation that fuels economic growth. The economic consequences of such resistance are not just theoretical; they have played out before, most infamously in the mid-20th-century rubber tire industry. Back then, excessive labor costs driven by aggressive labor union bargaining forced companies to relocate to less unionized regions, destabilizing local economies and eroding industrial competitiveness.[68] Yet, to be fair, there are cases where labor unions have managed to boost productivity, as seen in the US and Canadian iron ore industries during the 1980s crisis. Back then, facing intense competition from Brazil and the real threat of permanent mine closures—25 percent of Minnesota mines had already shut down—labor unions made concessions that streamlined work practices. Machine operators were finally allowed to perform basic repairs, and overstaffed repair crews were cut from 50 to 25 percent at the largest mine. Unsurprisingly, the most substantial productivity gains came from mines where these rigid labor union rules were most significantly relaxed.[69]

Contrast this with unionized US school districts, which manage to extract more funding, raising per-pupil spending by about 12.3 percent and increasing teacher pay. Despite these higher inputs, school productivity did not improve. Dropout rates were actually higher, suggesting that while labor unions are adept at securing financial resources, they often miss the mark on effective resource allocation.[70]

The economics literature consistently shows that more powerful and aggressive labor unions with unsustainable demands also tend to reduce firm profitability, which in turn hurts worker-level outcomes. One way to understand this effect is to investigate how labor-market regulations shape the distribution of rents between firms and workers. One study showed that reducing labor union bargaining power—essentially a form of labor market deregulation—can lower real wages without impacting unemployment in the short term. However, over the long term, deregulation boosts firm profits, sparking greater market competition and new firm entry, which eventually drives down unemployment and restores wages to their previous levels. This dynamic illustrates how, in heavily unionized environments, the initial wage cuts from deregulation lead to broader economic benefits over time.[71] The direct and spillover effects of labor union organizing on firm profitability are particularly striking. For instance, companies facing labor union petitions see their stock prices drop by an average of 1.04 percent. This effect extends beyond the targeted firms: Nonunion firms in the same industry also experience market value declines—averaging 0.72 percent—as investors brace for potential spillover effects. In cases where labor unions win representation elections, the hit to market value is even steeper, suggesting that the financial markets view successful unionization as a substantial threat to profitability.[72]

Finally, institutional contexts can either mitigate or amplify the negative impact that labor unions have on employment, productivity, and investments. For example, a relatively more decentralized bargaining system—in which wage negotiations are organized at industry-region level—can sometimes alleviate negative effects, such as reduced employment or stagnated productivity. However, even under decentralized systems, labor unions’ ability to capture quasi-rents remains a significant obstacle to firm reinvest.tment. Quasi-rents, which are the profits that could otherwise be reinvested into the company for future growth, often get diverted to satisfy labor union demands beyond what are reasonably sustainable, reducing the firm’s capacity to innovate or expand.[73] Evidence from privatization cases in Mexico further supports this: State-owned enterprises (SOEs) with strong unions fetched lower auction prices. Potential buyers were deterred by the costly labor liabilities and the focus on employment rather than profitability, underscoring how union strength can directly impact firm valuation and economic performance.[74]

These findings underscore a recurring challenge: While unions can secure short-term gains for workers, their influence often complicates long-term investments and growth. Even when unions negotiate through structured bargaining, the diversion of profits away from reinvestment remains a concern. This not only hampers firm performance but also undermines future worker outcomes when demands are excessive, as reduced investment in innovation and expansion means fewer job opportunities and wage stagnation over time.

The impact of unionization on investment is overwhelmingly negative, particularly when it comes to capital and R&D.[75] There are rare exceptions, like in Germany, where unique institutional arrangements—such as worker councils working hand-in-hand with unions—have led to improved productivity and innovation.[76] Studies have long challenged the earlier rosy views of union benefits, arguing instead that unionization acts like a tax on capital returns, discourages investment in essential long-lived tangible and intangible assets, and slows both employment and productivity growth, especially in heavily unionized sectors.[77] The bottom line? Outside of the rare edge case of Germany, the effect of unionization on investment and R&D remains largely harmful.[78]

Another way to reconcile some of these findings on productivity is not through the absence or presence of unions, but through the lenses of bargaining weight. If unions are very powerful and have a strong bargaining weight, then the negative productivity channels (e.g., investment) may be greater than the positive productivity channels (e.g. employee morale). As discussed above, bargaining weight is a key determinant of whether the union’s monopoly face or the collective voice face will prevail. If unions are overly powerful and make excessive demands, the negative effects through the investment channel will be greater than the positive effects of employee behavior.

### U---2NC

#### Productivity growth is rock-solid. Tariffs priced in.

House ’8-7 [Sarah and Nicole Cervi; 2025; MS, managing director and senior economist for Wells Fargo’s Corporate and Investment Bank; MA, economist for Wells Fargo Corporate and Investment Banking; Wells Fargo, “Productivity: Through the Ups and Downs, Firm Trend,” https://wellsfargo.bluematrix.com/links2/html/a87b9bf5-4950-4589-aabb-89f9f54a2350]

Output per hour worked increased at a 2.4% annualized rate in Q2, bouncing back from the prior quarter's decline and helping to keep the underlying trend in nonfarm labor productivity growth solid. Unit labor costs rose at a 1.6% annualized rate and the four-quarter moving average is up 2.2% over the past year. As such, the still solid pace of nominal compensation growth remains unlikely to be the force that keeps inflation meaningfully above the Fed's 2% inflation target.

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Source: U.S. Department of Labor and Wells Fargo Economics

Q2 Productivity Rebound Keeps Unit Labor Costs Friendly for Inflation

Amid lingering concerns about inflation and more recent worries of economic activity wobbling, the firm trend in labor productivity is a welcome bright spot. Output per hour worked increased at a 2.4% annualized rate in the second quarter, bouncing back from the prior quarter's decline (chart). The rebound was underpinned by a sharp recovery in output growth (+3.7% annualized) that outpaced a 1.3% annualized gain in hours worked. While a solid outturn, output has been more volatile than usual due to massive swings in trade flows, which has distorted readings of productivity recently.

Smoothing with a four-quarter moving average, nonfarm labor productivity is up 1.8% year-over-year (chart). This pace matches its average annualized increase since the end of 2019 and is notably stronger than the past cycle's average of 1.5%. With workers more productive, firms have generally enjoyed increased profitability and employees have seen real earnings growth. Solid productivity growth also provides firms the flexibility to absorb higher costs of production without needing to mark up their selling prices to the same degree, which could help to counterbalance the inflationary impulse from tariff-related price pressures today.

#### AI and new businesses are already yielding dividends, teeing up a productivity boom.

Lahart ’25 [Justin and Lauren Weber citing John Haltiwanger; January 2; WSJ reporters; PhD economics, Distinguished University Professor of Economics at the University of Maryland-College Park; Wall Street Journal, “The American Worker Is Becoming More Productive,” https://www.wsj.com/economy/jobs/worker-productivity-america-growing-36f4c90c?st=HqWBCM&reflink=desktopwebshare\_permalink]

America is getting better at getting things done.

Take Vic Viktorov, a gym owner who increased revenue at his Boston business in 2024 by 30% without adding a single salesperson to the two already on staff. Instead, he has been using an artificial-intelligence model loaded with company documents, sales materials and other information. Now, he can complete in just minutes work that used to take hours, such as writing marketing plans, email drafts and social-media posts.

“It allows us to be lean, nimble and fast,” said Viktorov.

Productivity in the U.S., as measured by how much the average worker gets done in an hour, has been on the rise. That matters because the faster that productivity grows, the faster the economy can grow as well. The success of the U.S. economy, and why it has grown so much compared with other countries over the past century and more, has hinged on its productivity.

Productivity—the total output of the economy divided by hours worked—rose 2% in the third quarter compared with a year earlier, according to the Labor Department. That marked the fifth quarter in a row with an increase of 2% or better. In the five years before the pandemic, there were only two such quarters.

The gains in part reflect massive changes in the U.S. economy since the onset of Covid-19. Companies learned new ways of doing things and adopted new technologies, while an upheaval in the labor market moved workers into more productive jobs.

Another big change in the American labor force—a massive influx of immigration—might also have played a role. Immigrants are often slotted into manual-intensive jobs, which could allow other workers to move up to more highly skilled jobs.

Businesses learned new ways to operate: QR codes instead of paper menus at restaurants, for example, or a videoconference instead of a time-consuming trip out of town. There has also been a big and continuing jump in the number of new businesses getting started.

And workers, for their part, moved themselves into better-paying and higher-skilled jobs. When restaurants, hotels and retailers reopened after briefly shutting down, they struggled to find workers and were more inclined to offer bonuses or promotions. That made it easy for, say, a cashier at a poorly run store to get work at a well-run one—where he might earn more money, have more responsibilities and get more done.

Of course, increased productivity isn’t always good news for workers: One way that companies get more productive is by laying off employees. New technologies such as AI can create new jobs and make workers more efficient—or take their jobs.

The recent dockworkers strike was fueled in part by port employers’ desire to expand the use of automated machinery on docks. President-elect Donald Trump threw his support behind the dockworkers, saying in December that automation threatened jobs.

And it isn’t clear that the move up in productivity growth will last. The figures are both volatile and subject to revision. The wave of job switching after the pandemic hit has run its course. And so far, productivity isn’t experiencing anything like the boom in the 1990s, when the wide-scale adoption of the personal computer and the advent of the internet reshaped the economy.

But at the least, it looks better now than before the pandemic, when economists worried the U.S. was stuck in a low-productivity funk.

With labor scarce in recent years, Novae, a Markle, Ind.-based maker of trailers for pickup trucks, built a state-of-the-art factory that opened six months ago. It cost $35 million, about seven times more than typical plants in the industry, and output is already 35% higher per worker, according to Chief Executive Manish Bhandari. He expects even better results over time, partly because the new factory helps the company retain its skilled workers.

At the plant, Novae automated some processes and incorporated improvements suggested by workers. One employee designed a bin that hangs 3 inches away from assemblers’ hands and holds a fastener used in the trailer’s frame.

The company also worked with Streamliners, an operations consulting firm, on an older factory near Minneapolis, with a goal of increasing productivity by 70%. Lacking additional room to expand, the team designed a whole new layout for the existing space.

“There is no silver bullet here,” Bhandari said. “It’s hundreds of small decisions.”

‘They don’t have anything to lose’

The stakes are high. Economic growth fundamentally relies on how many people are working and how much they can produce while they are on the clock.

But America’s scope for expanding its labor force is limited: The population is increasing slowly, the baby-boom generation is retiring, and Trump has promised to heavily restrict immigration and deport millions of immigrant workers who are already in the U.S. Stronger productivity would help bolster the economy and support an aging population.

Productivity also helps keep inflation in check: A more efficient business can be more profitable and pay its workers more without raising prices.

In November, there were a seasonally adjusted 157,678 “high-propensity” new-business applications, those with a high likelihood of turning into businesses with payroll, according to the Census Bureau—nearly 50% above the monthly levels that prevailed before the pandemic.

That is a positive sign for productivity, for two reasons, according to University of Maryland economist John Haltiwanger.

First, when there are new opportunities for innovation, as with cars a hundred years ago or computers in the 1980s and 1990s, new businesses proliferate. Second, new businesses are quicker to adopt new technologies. That can allow them to hire fewer workers to get things done.

“They’re more likely to do radical things,” Haltiwanger said. “They don’t have anything to lose, so to speak.”

Hybrid-work arrangements might have also helped productivity for white-collar workers by creating a balance between the quiet of home and face-to-face interactions of the office. Hybrid work also appears to improve employee retention, said Stanford University economist Nick Bloom, meaning businesses don’t lose time training new workers.

#### There’s tons of productivity growth in the pipeline---the stars are aligned for a boom in efficiency.

Pethokoukis ’25 [James citing Jason Furman; March 7; senior fellow and the DeWitt Wallace Chair at the AEI; PhD economics, Aetna Professor of the Practice of Economic Policy at Harvard; American Enterprise Institute, “America’s Productivity Pop,” https://www.aei.org/economics/americas-productivity-pop/]

You love to see it. After a lengthy spell of sluggish growth, America’s productivity figures have turned decidedly rosier of late. New revisions from the Bureau of Labor Statistics show nonfarm business sector labor productivity now exceeds pre-pandemic forecasts, rising at an annual clip of 1.9 percent during the current economic cycle, according to an analysis by Harvard University economist Jason Furman, a former economic adviser to President Barack Obama.

This pace has held steady at two percent over the past four quarters. Though hardly comparable to the tech-fueled boom of 1995–2005, it represents a meaningful step-up from the anemic growth of recent years.

The quarterly pattern raises the possibility that this is no mere post-pandemic rebound, one reflecting the more efficient reallocation of resources after an economic shock. Perhaps we’re seeing a more durable trend, though data volatility suggests caution.

Intriguingly, artificial intelligence—despite lots of investment and even more hype—has likely contributed little thus far. Furman posits that AI’s productivity-enhancing effects are still largely offset by the resources firms are deploying to implement it. It’s a phenomenon called the J-curve effect: New technologies can initially decrease productivity while firms develop complementary organizational capabilities, only later yielding higher productivity and profits.

From the paper “The Productivity J-Curve: How Intangibles Complement General Purpose Technologies” by Erik Brynjolfsson, Daniel Rock, and Chad Syverson, “General purpose technologies (GPTs) such as AI enable and require significant complementary investments, including co-invention of new processes, products, business models and human capital.” What’s more, rapid technological advancement may even freeze investment as firms delay decisions anticipating better versions.

(A side note: A new research note from Goldman Sachs tries to sleuth out why revenue for public companies exposed to the build-out of AI infrastructure increased by over $340 billion since 2022 and yet real investment in AI-related categories in the US GDP accounts has only risen by $42 billion. The bank’s explanation: First, a significant portion of the gap reflects simple cost inflation, particularly in semiconductors. Second, fatter profit margins and overseas sales boost corporate revenues but not domestic output. Third, America’s statistical machinery likely undervalues AI’s contribution by $100 billion, as crucial semiconductors and cloud services are recorded as intermediate inputs rather than final investment.)

For the world’s largest economy, this productivity revival could scarcely be more welcome. Furman notes, it remains “the most important factor” for long-term economic prospects. Let’s hope the upturn isn’t undermined by new US trade policy.

It would be awesome if advances in AI could add half a percentage point to productivity growth, if not more—and sooner rather than later. Let’s hope AI capabilities keep improving and businesses are able to put them to work in a timely fashion. I will be keeping an eye on this Manifold Markets contract:

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### Link---2NC

#### 3. R&D cuts, shirking, and innovator flight---all empirically proven.

Bradley ’17 [Daniel, Incheol Kim, and Xuan Tian; 2017; PhD, Professor in the School of Business and Finance AND Chair in Finance and Sustainability, University of Southern Florida; PhD, Associate Professor in Finance, University of Texas Rio Grande Valley; Chair and Professor of Finance, Tsinghua University; Management Science, “Do unions affect innovation?” vol. 63]

5.1 R&D spending

In this subsection, we examine whether a cut in R&D expenditures after a successful union election is a possible underlying mechanism through which unionization impedes firm innovation. Because of misaligned incentives between employees and firms after unionization, unionized employees cannot credibly commit that they will not demand higher wages once the innovation process has started and the costs are sunk, so this ex-post holdup on the part of employees could lead to an ex ante underinvestment in innovation inputs (e.g., R&D) by firms. While previous studies (e.g., Allen, 1988; Bronars and Deere, 1993; Connolly, Hirsch and Hirschey, 1986; Hirsch, 1992) tend to find a negative association between industry- or firm-level unionization rates and R&D expenditures, to the best of our knowledge, a causal link has not been established.

We revisit this relation and attempt to establish a likely causal link between unionization and R&D expenditures in our RDD framework, using firm-level union election data. Because R&D expenditures are not available for privately-held firms, for this test we focus on the sample of publicly-traded companies. R&D expenditures and firm total assets are from Compustat. We use the local linear regression RDD with the optimal bandwidth advocated by Imbens and Kalyanaraman (2012) with a triangular kernel. We substitute R&D/Assets as the dependent variable for our innovation output measures. We present the results in Table 7.

<<TABLE OMITTED>>

The coefficient estimates on Unionization are all negative and significant, suggesting that there is a negative effect of unionization on R&D expenditures. The negative effect of unionization on R&D spending is statistically significant beginning in year 1 and this negative effect is persistent through year 3 post-election.

The evidence presented in this subsection suggests that at least some of the decline in innovation output that we document can be attributed to a decline in the innovation input due to the misaligned incentives between unionized employees and firms.

5.2 Inventor productivity

A second possible mechanism leading to a decline in innovation is an increase in employee shirking because job security increases after a successful union election. As discussed before, because (unlike routine tasks) innovation is an exploration of untested approaches and the innovation process is long, risky, and idiosyncratic, innovation requires a significantly higher level of effort, persistence, and motivation on the part of employees. Unions that prevent employees from punishment for shirking (e.g., loss of job) impede innovation. Note that shirking may not be restricted only to inventors but could also occur among unionized hourly employees who serve as supporting staff, which indirectly affects inventors’ productivity. We test this conjecture by examining the change in innovation productivity of individual inventors surrounding union elections in a DiD framework.

To mitigate firm heterogeneity concerns, we first match firms that win the union election (treatment firms) with those that fail the union election (control firms) using a nearest-neighbor propensity score matching algorithm. Because we cannot observe accounting information for privately-held firms, we match firms based on firm industry and union election year. We ensure each treatment firm is matched to a unique control firm.

We collect individual inventor data from the Harvard Business School (HBS) patent and inventor database available at http://dvn.iq.harvard.edu/dvn/dv/patent. The HBS patent and inventor database provides information for both inventors (the individuals who receive credit for producing the patent) and assignees (the entity that owns the patents, which could be a government, a firm, or an individual). It provides a unique identifier for each inventor so that we are able to track the mobility of individual inventors.21 We define two groups of inventors. “Stayers” are inventors who produce at least one patent in the firm holding union elections both three years before and after the election year. “New hires” are inventors who produce at least one patent within three years after the union election year in the firm holding union elections, but produce at least one patent in a different firm within three years before the union election year.

<<TABLE OMITTED>>

Table 8 presents the DiD results. We compute the DiD estimate by first subtracting the total number of patents per inventor over the three-year period preceding the election from the total number of patents per inventor over the three-year period after the election for each control firm. The difference is then averaged over the treatment firm and reported in column (1). By doing this, we count each firm once regardless of the number of inventors it has.

To evaluate the quality of the patents, we first compute the citation ratio per inventor for each control firm by counting the total number of patents it generates three years before (or after) the union election as well as the total number of citations received by these patents, and dividing the latter by the former. We then calculate the difference in citation ratios before and after the election and average it over all control firms. We report it in column (1). We repeat the same procedure for treatment firms and report the average change in the total number of patents (citation ratios) surrounding the union election year in column (2). The DiD estimate is simply the difference in differences for the treatment and the control firms, and is reported in column (3). We report the p-values of the DiD estimates in column (4).

We first compare “stayers” in treatment firms with those in matched control firms. The DiD estimator for patent counts is negative and significant at the 1% level, suggesting that stayers of unionized firms become less innovative after the union election compared to their counterparts in non-unionized firms after the union election. The DiD estimate for patent quality is negative and significant at the 1% level, because the drop in patent quality produced by the inventors of treatment firms is significantly larger than that produced by the inventors of control firms.

Next, we compare the innovation productivity of “new hires.” The DiD estimates for both patent quantity and quality are negative and statistically significant, suggesting that the inventors who newly join the unionized firms after the union elections become less innovative than those who newly join the firms that fail to unionize, compared to their own productivity in their previous firms.

Overall, the evidence presented in this subsection is consistent with the view that shirking by scientists or their supporting staff may be another possible explanation for the reduction in innovation output after union election wins.

5.3 Inventor departures

In this subsection, we discuss a third possible underlying mechanism through which unionization impedes firm innovation—the departure of innovative employees. While DiNardo and Lee (2004) find little evidence on the effect of unionization on average employee wages, they ignore the distribution of employee earnings. Frandsen (2012) shows that unionization substantially reduces wage gaps between the lower end and the upper tail. To the extent that innovative individuals have better job prospects and are in high demand in the labor market, reduced wage gaps due to unionization may force out innovative employees as they seek better career opportunities. This could also contribute to the reduction in innovation output after successful union elections.

To test this conjecture, we again use the inventor information obtained from the HBS patent and inventor database and define “Leavers.” Leavers are inventors who produce at least one patent in the firms holding union elections within three years before the election year and at least one patent in a different firm within three years after the union election year.

<<TABLE OMITTED>>

The top panel of Table 9 reports the DiD results for leavers. Column (1) suggests that leavers of unionized firms on average generate a larger number of patents after the union election, while column (2) suggests that leavers of firms that fail to unionize on average generate fewer patents after the union election. The DiD estimator for patent counts is positive and significant at the 5% level. Focusing on the number of citations per patent, while both groups of leavers generate patents that have a significantly lower impact after the union election, the drop in patent quality is smaller among those that depart unionized firms. This difference leads to a positive and significant DiD estimate reported in column (3).

Finally, we directly test whether unionization leads to the departure of innovative and talented inventors. We perform this test in the RDD framework and report the results in the bottom panel of Table 9. The dependent variable in columns (1) and (2) is No. of Top Leavers, which is the number of top inventors who leave the firm within the first three years after the union election. We define a top leaver if a leaver is in the top 5 percentile distribution of innovation productivity three years before the union election year among all leavers. In columns (3) and (4), we use Ln (1+no. of Top Leavers) as the dependent variable. We report the results from the global polynomial estimations in columns (1) and (3) and from nonparametric local linear regressions in columns (2) and (4).

The coefficient estimates on Unionization are positive in all columns and statistically significant except for column (2), suggesting that unionization is positively related to the number of top leavers. According to the magnitude of Unionization in column (4), unionized firms have 2% more top inventors that leave the firm than non-unionized firms in the first three years after the union election.

Overall, the evidence suggests that leavers of unionized firms are more innovative than those of firms that fail to unionize and a larger number of top inventors leave firms after they win union elections, which is consistent with our conjecture that the departure of innovative inventors is a possible underlying mechanism that allows unionization impedes firm innovation.

#### Sectoral bargaining locks in inflexible labor terms, complexity, and industrial strife---dragging down productivity.

Partridge ’19 [Roger and Bryce Wilkinson; 2019; LLM, Chairman and Senior Fellow of The New Zealand Initiative; PhD economics, Senior Fellow at The New Zealand Initiative; New Zealand Initiative, “Why Fair Pay Agreements would be bad for labour,” https://www.nzinitiative.org.nz/reports-and-media/reports/work-in-progress-why-fair-pay-agreements-would-be-bad-for-labour/document/553]

Lack of flexibility

Collective bargaining of the sort contemplated by the FPAWG lacks flexibility. FPAs are intended to be applied across industries and across occupations. Consequently, by design, they ignore the needs and circumstances of individual employers and their workers trying to meet the demands of a competitive domestic and international marketplace.

How likely is it that an FPA will:

• permit bespoke changes to shift arrangements desired by one innovative firm in an industry, but not by others; or

• permit changes to terms and conditions unanimously agreed to by the workforce of a specific employer but which make different trade-offs – and therefore infringe the “favourability principle”?

Furthermore, union officials in the centralised bargaining structure envisaged by the FPAWG cannot hope to be informed about – or take account of – the varying needs and circumstances of each and every employer of the workers they are mandated to represent. Nor can the statutory body whose task it is to adjudicate if agreement cannot be reached by representatives tasked with negotiating an FPA.

Collective bargaining of the sort contemplated by the FPAWG lacks flexibility

This lack of flexibility with sector- or occupation-wide collective bargaining will be exacerbated by the FPAWG’s proposed prohibition on employers – individually or collectively – from initiating changes to collective bargaining arrangements.131

The adverse impacts of a system of FPAs will be amplified by disruption from automation and innovation to the future workplace. Drawing on research from the McKinsey Global Institute, the report A Future that Works from the Prime Minister’s Business Advisory Council predicts that New Zealand workplaces face technological disruption at 10 times the pace of the Industrial Revolution.132 The report notes that automation holds enormous potential for New Zealand through increased productivity. However, the report concludes that the extent of the benefits will depend on the speed of automation adoption relative to international competition.133

Consequently, it may never have been more important that our labour market regulations operate flexibly to enable individual firms to make timely changes to the terms and conditions of employment to meet the rapidly changing needs of a competitive marketplace. Yet centralised, compulsory collective bargaining of the sort envisaged by the FPAWG would institutionalise inflexibility. Rather than permit individual firms to respond nimbly to the opportunities presented by automation and innovation, firms will be straddled with terms and conditions that are fixed across entire industries or occupations. FPAs will be no prescription for the challenges to the future of work. Rather, they will present an obstacle to businesses trying to meet those challenges.

Perhaps the most blunt and inflexible aspect of the FPAWG’s recommendations is the proposal to extend the terms and conditions of FPAs to all workers in an occupation, including contractors.134 Treating contractors as employees would have profound implications for businesses and contractors alike – especially in sectors like transport, where market-based outcomes have led to many businesses using fleets owned and operated by contractors.135

Feedback from businesses interviewed in the course of our research indicated alarm at the adverse implications for productivity from treating owner-operator drivers as employees.136 Recognising the impracticality of its recommendation, the working group acknowledges the view that “contractors operate under a business model, rather than [an] employment model”, and that its recommendation raised “broader issues” that the government may want to address “by other means”.137

Even if FPAs do not extend to contractors, the FPAWG’s recommendations will significantly reduce the flexibility of New Zealand’s labour markets for reasons outlined above.

Poor incentives

FPAs may also reduce incentives for workers to innovate and work hard. That is the conclusion of the OECD in its Employment Outlook 2018 report.138 The OECD’s conclusion relies on findings in several recent European studies that decentralised wage-setting is associated more with higher productivity than the centralised wage-setting recommended by the FPAWG.139

The OECD conclusion is also consistent with New Zealand’s experience of comparatively rapid increases in multi-factor productivity in the 1990s following the ECA reforms. As we saw in Chapter 3, this sustained period of productivity growth followed a long period of moribund productivity growth under New Zealand’s former system of industrial awards.140

While the OECD also notes the potential for centralised collective bargaining to increase aggregate productivity by setting higher wage floors, forcing unproductive firms to exit the market,141 this means firms failing and jobs being lost. As noted earlier, this is hardly a sensible strategy for labour market reform in New Zealand.142

Cost and complexity

Experience from overseas suggests the centralised, compulsory collective bargaining framework envisaged by the FPAWG will introduce higher cost and complexity to the operation of our labour markets.

Complexity will arise from, among other matters, the need:

• to determine the limits on an “industry” or “occupation”, including whether a particular business falls within a specific “industry” or whether a particular role falls within a specific “occupation”;

• to determine whether the thresholds for triggering or initiating an FPA process have been met;

• to determine which unions and employer organisations are mandated and entitled to represent which workers and businesses. As noted in Chapter 1, so-called “demarcation” disputes between unions (of which there are 135 in New Zealand) were a common phenomenon under New Zealand’s former awards system;

• for consultations between the various representative bodies on the above issues and on the terms and conditions to be decided and being negotiated (in itself an immensely complicated issue when the recommendations envisage negotiations across whole industries or occupations); and

• to determine outcomes judicially if agreement cannot be reached between employee and employer representatives.

These matters may seem simple. In practice, they will create uncertainty and complexity in the operation of the labour market. And they will create a field day for lawyers.

Experience from overseas suggests the centralised, compulsory collective bargaining framework envisaged by the FPAWG will introduce higher cost and complexity to the operation of our labour markets

Box 1 provides some examples from Australia of the types of complications expected to arise from the working group’s recommendations. They are outlined in more detail by John Slater in Industrial Relations in Australia: A Handbrake on Prosperity. 143

A reduction in the dynamism and fluidity of labour markets will adversely affect economic growth and productivity. Unfortunately, the FPAWG report shows few signs of understanding either the risks its recommendations will create, or the adverse consequences for wages, workers and welfare.

Harm to industrial relations

Compulsory industry- or occupation-wide collective bargaining in the form of FPAs also risks taking the “relations” out of industrial relations. Instead of a firm and its workers sitting around a table and discussing their respective wants and needs – and the trade-offs each is willing to make in the interests of a harmonious and productive workplace – negotiations will take place between remote representatives from one or more unions and business organisations.

The change in dynamics will be profound, even for New Zealand’s larger businesses. As one <<BOX 1 OMITTED>> employer put it to us, “[Under FPAs] I will stop being an employer of labour and become a user.”148 Another noted, “Together with the unions we have invested heavily in processes both within and outside bargaining that promote collaborative problem-solving by ‘the people closest to the problem’ with real success. That will be lost with negotiations undertaken by strangers with strangers.”149

It is little wonder that pre-ECA industrial relations in New Zealand were characterised by industrial strife (well-illustrated by Figure 1).

To mitigate this risk under a system of compulsory FPAs, the FPAWG recommends that workers should be prohibited from taking industrial action in connection with the FPA process. However, even without strike action, the representative role envisaged for unions will be a significant logistical exercise, requiring multiple stop-work meetings to enable consultation with workers across entire industries or occupations. Consultation will be needed for initiation, the course of negotiations, and ratifying the final terms of FPAs. Consequently, the FPA process will involve extensive industrial disruption, even when industrial action is not taking place.

Of more concern, perhaps, is the risk of a return to industrial action commonly described as “second-tier bargaining”. The history of New Zealand’s pre-ECA industrial relations suggests the FPA process risks raising workers’ expectations for high wage increases. To enable less-profitable employers to cope with award outcomes, the 1960s and 1970s saw some conservative awards that did not meet workers’ expectations (the most notorious of which was the “nil” wage order of 1968 referred to in Chapter 1). Workers subsequently put pressure on individual employers to negotiate “above award” settlements. This “second-tier bargaining” contributed to New Zealand’s historically high levels of strikes and lockouts during the 1970s and 1980s.150

The adverse implications for productivity of a return to the industrial strife experienced in New Zealand’s recent past casts a shadow over the FPAWG’s recommendations to return to compulsory sector-wide collective bargaining.

#### The link zaps advantage one.

Atkinson ’19 [Robert D. and David Moschella; November 12; PhD, founder and president of the ITIF; nonresident senior fellow at ITIF; Information Technology and Innovation Foundation, “The Enterprise Automation Imperative—Why Modern Societies Will Need All the Productivity They Can Get,” https://itif.org/publications/2019/11/12/enterprise-automation-imperative-why-modern-societies-will-need-all/]

One major benefit of higher productivity is it helps nations’ traded-sector firms compete globally. This is clearly true when productivity in traded-sector industries such as motor vehicles, appliances, and semiconductors increases faster than it does for foreign competitors. But it is also true, though more indirectly, when non-traded firms boost their productivity. This is because traded firms purchase many inputs (e.g., legal services, health care, transportation, etc.) from non-traded firms. When the productivity in these areas goes up, traded-sector firms pay less for their inputs, thereby making them more cost-competitive globally.

Higher productivity can also boost the reshoring of work back to the EU or the United States. Indeed, the coming wave of ICT innovations could give high-wage countries more of a productivity boost than lower-wage nations. Although using emerging technologies will often be less expensive in lower income regions, the relative price of the technology compared with labor costs will still be greater than in higher wage nations. Thus, the payback period in terms of actual labor cost savings will often be shorter in high-wage nations.12

#### AND, productivity is the only path to sustainable wage growth.

Ho ’24 [Justin Ho citing Preston Mui and Tim Duy; October 31; reporter for Marketplace; senior economist with the research group Employ America; chief U.S. economist at SGH Macro Advisors Marketplace, “Wage growth is outpacing inflation. High productivity is the key to sustaining that,” https://www.marketplace.org/story/2024/10/31/higher-productivity-wage-growth-outpaces-inflation-fed]

Wednesday we heard that the 2% gap between wages and inflation could stick around, like it did back in the ’60s. The secret sauce to making that happen? Worker productivity.

According to the Labor Department, productivity has grown in six of the last seven quarters. One reason: Unemployment is low and more people are working. Which means?

“They have time to move from lower-productivity jobs to higher-paying, higher-productivity jobs, and they get time to train up in their new occupations,” said Preston Mui, senior economist with the research group Employ America.

He said the government has also invested a lot in American manufacturing. Plus, supply chains have improved.

So, Mui said, workers are more efficient. “We’re seeing an uptick in the growth rate of productivity, which means that we’re seeing a fall in the growth rate of cost.”

That means businesses have fewer reasons to raise prices and bosses can pay their workers more.

“This is a basic, I would say, a basic building block about how we think about sustainable wages over time,” said Tim Duy, chief U.S. economist at SGH Macro Advisors.

And it’s how the Federal Reserve thinks about sustainable wage growth, he said. This month, Christopher Waller, a member of the Fed’s board of governors, said wage growth could sit comfortably at around 4%, or even more, because productivity keeps growing.

“As long as productivity is high enough, then it will be sustainable. And it will not create higher inflation,” Duy said.

But it’s not a given that productivity will keep growing. “Productivity is very volatile on a quarter-to-quarter, or even year-to-year, basis,” said Sarah House, a senior economist at Wells Fargo.

She said there are plenty of reasons to believe that productivity will stay strong. A big one is that the tight labor market of the last several years prompted employers to invest in upgrades.

“New software that makes workers more efficient. Also, increased spending on research and development that can help that next big innovation that can boost productivity,” House said.

That means the current pace of compensation growth, at around 4%, is looking pretty sustainable, she said.

#### Economics lit overwhelmingly agrees the net effect of unions is negative---particularly on investment, profit, and R&D. Chart inserted.

Palagashvili ’25 [Liya and Revana Sharfuddin; May 7; PhD economics, senior research fellow and director of the Labor Policy Project at the Mercatus Center; MA development economics, predoctoral researcher at the Labor Policy Project at the Mercatus Center; Mercatus Center, “Do More Powerful Unions Generate Better Pro-Worker Outcomes?” https://www.mercatus.org/research/working-papers/do-more-powerful-unions-generate-better-pro-worker-outcomes]

Bargaining power plays a central role in determining whether the labor union’s voice face or monopoly face will prevail. A labor union’s ability to extract monopolistic gains for its members is shaped by the degree of competition and constraints on substitution facing both the employer and the union. When a single union represents all workers in collective bargaining, there is no competition from other unions, and the firm cannot bypass the union by negotiating directly with individuals. At the same time, workers also face constraints on substitution, as they cannot individually bargain for better terms or seek employment under a different union within the same firm or, in some cases, industry. This mutual lack of alternatives strengthens the union’s monopolistic position and bargaining power, giving it significant leverage in negotiations. A labor union’s ability to extract monopoly gains for its members is determined by the degree of competition and constraints on substitution facing both the employer and labor union. The monopolistic power of US labor unions is a legal construction that can be altered—we discuss this in more detail in the section on policy recommendations, where we suggest that limiting the legal monopoly status of labor unions could diminish their negative, monopolistic aspect while shrinking any short-lived wage premiums for unionized members. Theoretical models have long warned that union power doesn’t just boost wages indefinitely; in fact, press for unsustainable terms, and it can backfire—reducing union income by stifling investment and worsening cost-price imbalances, ultimately driving investors away.[47]

Figure 1 provides a visual interpretation of the empirical effects that labor unions have on worker and firm-level outcomes beyond wages (which we covered in the previous section). The chart summarizes the directional effects of unionization based on the selection of papers included in our study. The values represent the net count of studies reporting either positive (green) or negative (red) effects for each outcome. For instance, the “Employment” variable reflects the number of studies finding either adverse (red) or favorable (green) employment effects due to unionization.

Figure 1. Net number of studies reporting positive or negative effects (excluding wages)

<<FIGURE 1 OMITTED>>

Note: The variable Resource Allocation refers to the impact of unionization on how resources, such as labor and capital, are distributed within firms or across sectors. Studies included under this variable examine whether unionization enhances or hinders the efficient allocation of resources. Investment refers to long-lived tangible capital. Other variables on topics less central to the focus of this paper, such as Product Quality, Self-Employment, and Supply of High-Quality Labor, are omitted from the chart for clarity but included in table A1 in the appendix.

Source: Authors’ findings based on their analysis of the literature on labor unions

As shown in figure 1, most outcomes—including employment, investment, productivity, firm survival, profit, R&D, resource allocation, and output—exhibit predominantly negative effects (red bars), suggesting that most studies show adverse consequences of unionization in these areas. The chart visually emphasizes that unionization’s impact is more often associated with negative outcomes than positive ones across these metrics.