# 2AC

## Innovation Adv

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## Conduct Adv

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## T Per Se

#### We meet – aff creates ex ante rules that make conduct deemed anti-competitive per se illegal

Crane, Assistant Professor, Benjamin N. Cardozo School of Law, ‘07

(Daniel, “Rules Versus Standards in Antitrust Adjudication,” 64 Wash. & Lee L. Rev. 49)

The solution, though imperfect, is to use bright-line rules as immunizing devices for broad swaths of industrial behavior while preserving a role for standards in determining liability for conduct falling outside of the safe harbors created by the rules. For many categories of conduct, such an approach minimizes the cost of configuring the law because the rule itself supplies a conclusive answer of no liability or presents a safe harbor that defendants can elect in order to minimize the likelihood of litigation. For example, specifying that a firm cannot be held liable for tying unless it has at least a 50% market share in the tying market would provide a case-dispositive safe harbor that could reduce litigation costs substantially in a large number of tying cases, even though such costs would remain in cases where the defendant's market share exceeded 50%. While it would also save costs to specify prohibitory rules for cases falling outside the safe harbor (such as making tying per se unlawful if the defendant's tying product market share exceeds 50%), the generalization of such a rule would be vastly overbroad. Bright-line rules are most appropriate in antitrust when used as immunizing devices. Relatively few categories of conduct are unambiguously harmful and can be prohibited in equally categorical terms.

**Prohibitions are the means imposed on individuals**

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Hemme Battjes, "In Search of a Fair Balance: The Absolute Character of the Prohibition of Refoulement under Article 3 ECHR Reassessed," Leiden Journal of International Law, 22 , pp. 583-621, 9-1-2009, accessed via Nexis Uni

Does this 'relativity' of the minimum level of severity detract from the 'absolute' nature of Article 3, and hence imply a limitation or balancing as meant by the UK government? There is, arguably, no reason to suppose so. As the prohibition is defined by means of the effect a certain treatment has on the individual, its qualification as ill-treatment depends on the circumstances of the case and the features of the person concerned. Thus in Mayeka and Mitunga the Court ruled that detention of an unaccompanied five year-old child constitutes inhuman treatment, [116](https://advance.lexis.com/document/?pdmfid=1516831&crid=e2fb5ec5-8b4a-4989-a11c-3967e3c72dcb&pddocfullpath=%2Fshared%2Fdocument%2Fanalytical-materials%2Furn%3AcontentItem%3A605P-2S71-JS0R-23GP-00000-00&pdcontentcomponentid=400004&pdteaserkey=sr3&pditab=allpods&ecomp=qzvnk&earg=sr3&prid=f6e3a168-60b9-46d1-b026-fe8960301bc2) whereas detention under the same conditions would not (or not necessarily)do so for an adult, or the same child if accompanied by its parents. In the latter case the underlying reasoning is not that detention of the child is as such inhuman but justified by the presence of its parents. Rather, the detention of the accompanied minor would not cause fear and anguish. The minimum level of severity is, however, subject to another form of relativity:  
In order for a punishment or treatment associated with it to be 'inhuman' or 'degrading', the suffering or humiliation involved must in any event go beyond that inevitable element of suffering or humiliation connected with a given form of legitimate treatment or punishment. [117](https://advance.lexis.com/document/?pdmfid=1516831&crid=e2fb5ec5-8b4a-4989-a11c-3967e3c72dcb&pddocfullpath=%2Fshared%2Fdocument%2Fanalytical-materials%2Furn%3AcontentItem%3A605P-2S71-JS0R-23GP-00000-00&pdcontentcomponentid=400004&pdteaserkey=sr3&pditab=allpods&ecomp=qzvnk&earg=sr3&prid=f6e3a168-60b9-46d1-b026-fe8960301bc2)

#### And, they’re implemented via legal tests

Mark S. Popofsky, Antitrust Partner at Ropes and Gray, Served as Senior Counsel to DOJ Antitrust Division, Adjunct Professor of Advanced Antitrust Law and Economics at Harvard Law School and the Georgetown University Law Center, 2016, Section 2 and the Rule of Reason: Report from the Front, CPI Antitrust Chronicle March 2016 (1)

Courts remain, in the words of one observer, mired in an “exclusionary conduct ‘definition’ war.”2 Applying Section 2’s broad prohibition on “monopolizing” conduct requires courts to select a governing legal test. Section 2 legal tests run the spectrum from rules of per se legality to rules of near per se illegality.3 Courts, nonetheless, largely apply two dominant paradigms. The first consists of legal tests based on bright-line rules or safe harbors. Familiar examples include the Brooke Group4 below-cost price test for analyzing predatory pricing claims and the Aspen/Trinko5 “profit sacrifice” test for refusals to deal. Developing bright-line rules for Section 2, proponents argue, promotes business certainty and reduces the risk of chilling otherwise procompetitive conduct. The second paradigm is rule of reason balancing. Arguably the default Section 2 legal test,6 courts and commentators have described Section 2’s rule of reason in various ways: as mandating a step-wise approach, as requiring a balancing of pro- and anticompetitive effects, or (to borrow from Section 1) a framework for generating the enquiry “meet for the case.”7 However the rule of reason is expressed, its champions contend, its flexibility and fact-intensive approach permits courts to identify anticompetitive conduct without the under-inclusion that is an admitted feature of safe harbors and other bright-line rules.

#### Prohibition turns on whether something is anticompetitive or not

Light, Assistant Professor of Legal Studies and Business Ethics, The Wharton School, University of Pennsylvania, ‘19

(Sandra, “The Law of the Corporation as Environmental Law,” 71 Stan. L. Rev. 137)

The more fact-intensive inquiry under the rule of reason tests “whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition.”196 While this extremely broad statement might suggest that any fact is relevant to the inquiry, the salient facts under the rule of reason are “those that tend to establish whether a restraint increases or decreases output, or decreases or increases prices.”197 If an anticompetitive effect is found, then the action is illegal and the rule of reason operates, like the per se rule, as a prohibition.198 The rule of reason can also operate as a disincentive, even if no court finds an anticompetitive effect, as uncertainty and litigation risk may discourage firms from undertaking legally permissible, environmentally positive industry collaborations.199

## T - Scope

#### Scope has two parts – unlawful behavior and methodology for making that determination

Bauer, Professor of Law, Notre Dame Law School; Visiting Professor, Emory

University School of Law, ‘04

(Joseph P., “Reflections on the Manifold Means of Enforcing the Antitrust Laws: Too Much, Too Little, or Just Right?” 16 Loy. Consumer L. Rev. 303 2003-2004)

Lately, much attention has been given to the scope of the antitrust laws. This discussion has two overlapping components: (1) consideration of the substantive doctrines specifying the behavioral or structural changes that are or are not unlawful and the appropriate methodology; and (2) analysis for making those determinations with attention given to the appropriate vehicles for enforcing the antitrust laws. Some argue that the antitrust laws proscribe activities that are either pro-competitive or at worst benign.' Further, they assert that the multiplicity of antitrust enforcers and enforcement devices has resulted in undue burdens, including excessive cost, time delay, and forestalling of legitimate, procompetitive behavior.

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#### Perm is best – a theory that subsumes all economic logics into the frame of neoliberalism is analytically useless and destroys alt solvency

Birch 19 – Associate Professor of Geography, York University

Kean Birch, and Simon Springer, Professor of Human Geography and the Director of the Center for Urban and Regional Studies at the University of Newcastle, Australia, Peak neoliberalism? Revisiting and rethinking the concept of neoliberalism, *Ephemera*, Vol. 19, Iss. 3, 467-485, <http://www.ephemerajournal.org/sites/default/files/pdfs/issue/19-3ephemera-aug19.pdf#page=7>

Perhaps we need to consider whether we can – or even should – try to salvage neoliberalism as a concept. And this boils down to unpacking what we actually mean when we use the term ‘neoliberalism’? Such a question should – and we stress should – be easy for us to answer; maybe not with a simple answer but with an answer nevertheless. And yet the more we have thought and written about neoliberalism through our (relatively short) careers so far, the more we have come to the conclusion that it is almost impossible to say clearly and consistently what we do mean by it anymore. We are not alone in this as we outline below.

Frustratingly, neoliberalism has become a word thrown around with much abandon to mean almost anything academics of a certain political persuasion simply do not like, particularly a kneejerk anti-market position according to Michael Storper (2016). One of us has suggested that it might be a politically astute step to seek some sort of rehabilitation of markets, in order to extricate them as an institution or mechanism forever associated with the right (Birch, 2017). Papadimitropoulos’s contribution gestures in this direction, as he examines the impacts of digitization on freedom in the workplace, casting his eye towards what the future might hold. While digitization is recognized as decreasing costs, improving productivity, and potentially ‘lifting all boats’ as is the neoliberal trope, it also produced precarious labour and technological unemployment, thus increasing the gap. To overcome the divide and transcend a neoliberal paradigm, Papadimitropoulos is most interested in a third argument that promotes the emergence of a post-capitalist economic paradigm built on the Collaborative Commons, supported by the Internet and free/open source technology. This model is argued to have the potential of creating a more sustainable and free economy. We think this is a useful reconceptualization of what might be on the horizon, but we want to also stress that our primary concern in this section is not to make a political move to rehabilitate neoliberalism, but rather think through the supposed wholesale transformation of ourselves, our organizations, our societies, and the world into market monsters – framed by, driven by, and subsumed within an all-consuming market (or quasimarket) logic of monetary exchange (e.g. Harvey, 2005), economization (e.g. Brown, 2015), and competition (e.g. Davies, 2014). In her contribution to the special issue, Elizabeth Houghton argues for a more nuanced use of the term as a result. For Houghton, although individual people – in her case, British university students – may construct their identities and subjectivities through neoliberal ‘technologies of the self’, they do so reflexively. By this, she means that the extent to which we – as individuals – take on an ‘ideal’ neoliberal subjectivity is an empirical question; consequently, our ‘actual’ subjectivities entail a messy mélange of neoliberal, non-neoliberal, and anti-neoliberal principles.

Before coming to that, however, it is important to note that a number of scholars have raised analytical concerns with neoliberalism, stretching back at least to the mid-2000s (e.g. Barnett, 2005; Braithewaite, 2005). First, and of particular relevance to this journal, Braithewaite (2005) argues that neoliberalism does not help explain a contemporary capitalism that is increasingly regulated, nationally and globally, and dominated by large business organizations controlling regulations and cornering markets (see Crouch, 2011; Birch, 2017). While corporate power is a cause for concern, lumping it under the banner of neoliberalism does a disservice to its careful explication; more needs to be done to examine the particularities of global capitalism beyond a neoliberal framing (e.g. May, 2015). Second, others like Barnett (2005, 2009), Boas and Gans-Morse (2009), and Venugopal (2015) note that neoliberalism has become an ‘antiliberal’ slogan that can be ascribed to government policies (e.g. privatization), development models (e.g. Washington Consensus), and academic disciplines (e.g. neoclassical economics) as one sees fit. Barnett (2009) is particularly scathing in this regard on two fronts: first, the assumption that economic relations or ideas define our lives subsumes our political agency to the logic of capital; while, second, it does not really matter what ideological façade (e.g. free markets or racism or ethno-nationalism) buttresses those same capital logics in the restoration of class power – a point Harvey (2005) himself notes. Finally, then, neoliberalism is applied in a deterministic fashion that erases the importance of other social or political phenomena that underpin personal, organizational, or national changes; people like Flew (2014) and Phelan (2014) argue that the way neoliberalism is used often steamrolls every other potential explanation. As such, the critics of neoliberalism end up reaffirming the claims made by its proponents; namely, that the one market rules us all.

In turning to the notion that individuals, organizations, and so on are transformed into ‘market monsters’ by neoliberal logics – exemplified by the writings of people like Dardot and Laval (2014) and Brown (2015), although evident across neoliberalism studies – we want to raise three points to problematize these arguments and their ongoing usefulness. And that is both on an analytical and political level.

First, as Storper (2016) and others (e.g. Le Gales, 2016; Birch, 2017) point out, the concept of neoliberalism tends to be deployed by its critics in a kneejerk fashion2 reflecting an underlying anti-market sentiment. This, for one, misses the analytical and empirical point often made by the self-same critics that markets are instituted; that is, markets are organized – no matter how seemingly ‘free’ they are presented as. More importantly though, it sidelines political support for all sorts of political-economic organizing and organization that might be compatible with a wider market system, one which might even remain capitalist. For example, voluntary and mutualist forms of economic organizing like worker or consumer cooperatives, anarcho-syndicalist organizations, social economy enterprises, etc., etc. are all compatible with markets in one form or another (Parker, 2002; Jacobs, 2007; Birch et al., 2017). Whether this anti-market sentiment reflects a broader anti-capitalist political stance can be seen as beside the point, from a historical-political perspective, if it means denigrating anyone or anything that engages with and within markets. A political stance in support of specific forms of economic democracy within markets (e.g. Cumbers, 2012; Malleson, 2014), on the other hand, provides varied avenues for different people to avoid their (seemingly unstoppable) transformation into market monsters. In contrast, critics of neoliberalism tend to be left with the state as the last (and often only) bastion against the expansion of markets, which leaves a lot to be desired as a political strategy.

Second, the idea that we are markets monsters is premised on an underdetermined assumption that we have absorbed a set of (primarily) market logics into our very being, resulting in a transformation of our identities and subjectivities such that we now think and act like entrepreneurs and/or business enterprises. It is not that clear whether entrepreneurs and enterprises are considered the same thing, though, especially in the Foucauldian analyses of Dardot and Laval (2014) and Brown (2015). And such ambiguity obscures more than it enlightens. Although these thinkers are primarily political theorists, and therefore less concerned with the empirics underpinning their arguments, the particular arguments made by these authors potentially blinds them to some of the important political-economic changes that end up undermining their claims. We point to two examples here. First, individuals and organizational actors are treated differently, legally-speaking, depending upon whether they are considered to be and treated as sophisticated market actors or not (Birch, 2017); as such, the courts recognize that different social actors understand and act in markets in different ways, meaning that not everyone has or is seen as having subsumed the same – or even similar – market logics. Second, almost all political-economic transactions nowadays are configured by standard contracts (Birch, 2016); that is, contracts that allow almost no negotiation or transactional choice. Economic activity, then, does not entail market negotiation or bargaining, but rather power dynamics associated with one party dictating terms to another (e.g. end user license agreements that we have no choice but to accept if we want to use a service).

Finally, the idea of the market monster is premised on the assumption that people now act more like ‘entrepreneurs’ than in the past, especially through their investment in their own ‘human capital’ (e.g. Foucault, 2008; Dardot and Laval, 2014; Brown, 2015). We use the word ‘assumption’ here, rather than argument, for a very deliberate reason; namely, that there is little indication that entrepreneurialism – as it is currently defined – is actually on the rise in supposedly key geographical sites of neoliberal ascendancy. For example, Birch (2017: 140-142) shows that absolute levels of new firm formation in the USA – the world’s epitome of neoliberalism par excellence – have been stagnant since the 1970s, meaning that relative levels have declined as the US population has grown. Similarly, self-employment levels have been declining in the USA since the global financial crisis and have fallen from 11.4 percent in 1990 to 10 percent in 2014. A simple reason for these declining rates of entrepreneurialism is quite simple: according to Blanchflower and Oswald (1998), the key characteristic defining whether someone becomes an entrepreneur or not is their access to capital, which largely depends on personal wealth (e.g. housing equity, inheritance, personal contacts, etc.). And since most people’s personal wealth has been declining relatively speaking (Piketty, 2014), the opportunities for people to invest in themselves – to become ‘entrepreneurs of the self’ – are severely limited. Rather, diverse forms of rentiership are on the rise across the economy, ranging from housing ownership through intellectual property monopolies to government and regulatory capture (Birch, 2019). We are, then, a far cry from being ‘entrepreneurs’ of the self.

Conclusion

Are we all now market monsters or is the idea of neoliberalism everywhere, all the time really just another appearance of the boogeyman trying to scare us? This is not an easy question for us to answer. The difficulty is both analytical and personal. For both of us, the bulk of our careers to date have been spent expounding neoliberalism and articulating critiques against it. A certain kind of anti-neoliberal framework has undoubtedly come to configure the way we have thought about the world for many years. We have been meticulous and stalwart in defending how this thing called ‘neoliberalism’ can and has been applied in our empirical studies. We have had reservations about the transformations of our employers over the last decade as universities increasingly move toward competitive business models and audit systems in their operations. And we have also been reflexive about how our own subjective positions have been implicated in neoliberal entanglements as two scholars who have published quite extensively on neoliberalism in our early careers (Birch and Mykhnenko, 2010; Springer, 2010a, 2015, 2016a; Birch, 2015b, 2017, 2018; Springer et al., 2016). Was it publish or perish under the heel of a neoliberal boot, or was it passion that inspired us?

There is always a lot to consider when it comes time to jump ship. We nonetheless have significant reservations about the future of neoliberalism as a useful way of structuring our thinking. The tides of our own understandings have shifted and rather than resign ourselves to the idea that our thoughts will forever be strewn across a neoliberal reef, we feel it is time to sink or swim. It would be easy to consider the line of questioning we are adopting here as yet another cliché mid-career academic volte-face. Fine. Glad to have made it simple! Undoubtedly there will continue to be multiple studies engaging with neoliberalism as an analytical frame, but for all this energy and effort being expended into the scholarship of neoliberalism, we have seen very little in the way of real world transformations that explicitly take neoliberalism by the scruff of the neck and toss it out of the door. Perhaps the best way to remove this unwanted visitor is to instead start recognizing ‘the pervasive nature of heterodox economic spaces’ (White and Williams, 2012), and begin celebrating them in ways that afford agency to communities and thereby enable organizational forms that we have yet to anticipate. If we continue to pound the neoliberal drum, the reverberations will continue to structure our understandings. For the two of us, we have had enough of this same old song and dance. At least as far as our scholarship is concerned, we have reached peak neoliberalism. There are new mountains to climb.

#### Only alt to competition policy is total state planning – that’s disastrous and sabotages tech progress – we can embrace competition policy without subjecting the whole economy to deregulation

Coniglio, antitrust attorney in the Washington, DC office of Sidley Austin LLP, ‘20

(Joseph V., “Economizing the Totalitarian Temptation: A Risk-Averse Liberal Realism for Political Economy and Competition Policy in a Post-Neoliberal Society,” 59 Santa Clara L. Rev. 703)

The implication of the foregoing is that the most pressing task for competition policymakers may not involve a rethinking of first principles. The principles of neoliberal competition policy may have ultimately been proven justified by an unprecedented period of economic growth, technological progress and reductions in poverty, and should presumably remain operative as long as they remain the best framework for bringing about these ends. Neither, as we have suggested, must the capitalist entrepreneur be lost in the process. The totalitarian temptation to submit to general state control of the economy-whether it be in the form of communism from below or fascism from above should be resisted so as to preserve and build upon the great prosperity Western Civilization has managed to achieve.

This statement will no doubt be highly unsatisfactory to many critics of neoliberalism who seek more fundamental and revolutionary changes. Surely, they suggest, there must be some principled basis for critiquing the neoliberal status quo with which so many are frustrated. Indeed, there very well may be, and none of the arguments in this article should be understood to the contrary. The goal of this article has been limited to a tailored defense of neoliberal principles only as they relate to competition policy, broadly understood. It does not suggest that neoliberal monetary, trade, and fiscal policies are also sound-let alone a neoliberal social order, where all the core institutions within society are organized according to the neoliberal principles of wealthmaximization, empiricism, and the rest.129 This is to say that even if neoliberalism is a sound theory as applied to the area of competition policy, neoliberal monetary policy, for example, may be problematic and a just target for contemporary critics. Similarly, claiming that competition policy should be enforced using a consumer welfare standard does not mean that all the organs of law and civil society should be oriented to maximize wealth or consumer welfare, even if this economic inquiry is nonetheless informative. 30 It is well known that several prominent neoliberals have expanded the neoliberal policy apparatus beyond the regulation of market capitalism with which antitrust is concerned to domains typically understood to be beyond a purely utilitarian purview.' 3 ' However, whatever the merits of these broader neoliberal policy programs, the competition policy baby, so to speak, should not be thrown out with the bathwater.

Consider the charge that neoliberal policies have increased wealth inequality in the United States. Some commentators attempt to link this increased inequality with a decline in competition'3 2 and, by implication, consumer welfare competition policy. Notwithstanding the interest such theories appeared to have garnered from highly distinguished economists and policymakers, such as Nobel Laureate Joe Stiglitz,133 one might alternatively consider whether increasing wealth inequality and the resultant social strife are far more a result of policies in other areas, such as monetary policy. 134 At the same time as Chicago School antitrust policy took root, the American economy began to undergo sustained expansions in the money supply and reductions in interest rates that, at least in theory, disproportionately reward the owners of financial assets, who are more likely to be wealthy. 135

#### Digital innovation solves sustainability

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(David, “Innovating innovation—Disruptive innovation in China and the low-carbon

transition of capitalism,” *Energy Research & Social Science* (37) 2018 266–274)

It must first be noted, though, that the advent of digital innovation is – per se not just in Googliberal form – a key element of the challenge, in terms of constructing complex government of complex systems. For, itself conceived as a power/knowledge process, digital innovation sits at a key node in the cycles of the contemporary capitalist system and its (currently overflowing, uncontrolled) proliferation of complexity (see Fig. 2, especially c). Digitization, and/or its flipside of informationalization, fundamentally consists of introducing a novel (i.e. ICT-based) mediation to processes of power/knowledge. For instance, manufacturing becomes mediated by software that, in turn, collects constant real-time data for further optimization; so too for information search, listening to music, ride-hailed journeys, even friendship. This novel mediation affords the reflexive and recursive measurement, transformation, interconnection and expansion of these power/knowledge processes at hitherto unprecedented rates and scales, while these digital innovations also thereby constantly and reflexively upgrade themselves – the very acme of the positive feedback loops constitutive of complex systems. In short, digital innovation is singularly productive of the problem-field of complex system government, even as it is generally evangelized as its panacea.

But there is no going back, no putting the digital genie back in the bottle or closing Pandora’s Box. The only way forward, thus, is to develop new models of digital innovation that can work with its capacity for proliferation of complexity but to more system-productive outcomes. In this respect alone, we can immediately see how a different (non-Googliberal) digital innovation necessarily must form a key element of any low-carbon transition. But conceived as a power/knowledge process, digital innovation also emerges as a clear, if as yet underexplored and seemingly tangential, aspect of low-carbon innovation itself.

This hinges precisely on how the digital is the would-be metamediator of all power/knowledge processes. For it follows not only that socio-environmental relations, technologies and practices (likewise conceptualized in power/knowledge terms) can be thus mediated, and thereby progressively transformed. But also that viewing any and every ecological problem-field in this way also immediately makes it (much more, if never perfectly or ‘correctly’, and indeed, likely problematically) amenable to capitalist ingenuity: pragmatically but avariciously exploring ways in which collation, mastery, ownership and possible construction of the relevant socio-environmental data – the ‘new oil’ [42] – can be of service to paying customers (and/or hopefully publics and state institutions) and hence profitable.2

In this way, then, the field of low-carbon innovation can be transformed from that of committed green pioneers worthily and laboriously constructing low(er)-carbon technologies, to a more generalized ‘greenrush’… with all that implies, both positive and negative. In other words, digital intermediation enables a process that harnesses the exceptional productivity (for good and/or ill − see conclusion) of capitalist innovation into a growing power momentum of low-carbon transition, and from here, in this late-neoliberal, unequivocally capitalist present.

Here the qualitatively tighter feedback loop of digital innovation (see Fig. 2c Cf b), as power/knowledge technologies reflexively upgrading themselves, also flips from problem to opportunity. While this dynamic is currently causing proliferating, untamed and destructive complexity, a digital greenrush would instead harness it into acceleration of productive innovation; and, indeed, a growing power momentum of sufficient heft that it can even break out of the profound current socio-technical system ‘carbon lock-in’ [43] (see Fig. 2d).

#### Market-based mechanisms are key to sustainability – we can solve environmental harm by pricing in negative externalities, but the alt is worse

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Mark Budolfson, “Arguments for Well-Regulated Capitalism, and Implications for Global Ethics, Food, Environment, Climate Change, and Beyond,” *Ethics and International Affairs*, vol. 35, no. 1, 2021, pp. 89-92, https://www.cambridge.org/core/services/aop-cambridge-core/content/view/96F422D04E171EECDEF77312266AE9DD/S0892679421000083a.pdf/arguments-for-well-regulated-capitalism-and-implications-for-global-ethics-food-environment-climate-change-and-beyond.pdf.

Applications to Food, Environment, and Climate Change

Let us turn to a concrete example. It is often claimed that we need less capitalism, less growth, and less globalization if we are to successfully address such challenges as climate change, population growth, air and water pollution, feeding the world, ensuring sustainable development for the world’s poorest people, and other interrelated challenges at the environmental nexus.22

However, if the argument for well-regulated capitalism is sound, then these claims are wrong. Just because the aforementioned challenges may require pervasive changes throughout the economy does not mean that they require large changes to the basic structure of the economy such as a move away from capitalism.

Climate change—like many large-scale environmental harms—is the perfect example to illustrate why large environmental challenges that require pervasive changes to the economy need not require large changes to the economy’s basic structure. The key point is that in that an unregulated marketplace polluters do not pay the true cost to society of their pollution, which incentivizes too much pollution; the best solution for society in the case of climate change and many other large environmental challenges is simply to use markets to regulate the relevant pollution by putting an appropriate price on emissions (reflecting the cost to society), so that people and firms have to pay the true cost of their emissions. This could be accomplished by putting a simple tax on emissions, or by instituting a more complicated market-based system.23

In more detail, the problem of climate change arises because humans do not have to pay the cost of the harms from greenhouse gas (GHG) emissions when they engage in emitting activities. As a result of not having to pay the true cost of these activities, we make decisions that lead to too many emissions, and a worse outcome than we could achieve if we behaved differently, which would require pervasive changes throughout the economy. But according to mainstream economics, the best solution to this problem is a textbook example of well-regulated capitalism that applies the theory of externalities to achieve pervasive changes across the economy at the least cost to society: We should tax24 GHG emissions at a rate equal to the harm they inflict if emitted, because this will (to a first approximation) create the right incentives to cause all of the pervasive changes throughout every aspect of the economy in the way that best achieves the optimal level of GHG emissions for society.25 And because one ton of GHG emissions does the same harm regardless of where it is emitted on the earth, there is just a single price that we should use as a tax on all emissions regardless of where they occur.

Many economists, including Nobel laureate William Nordhaus, argue that pricing the externality in this simple way is not only necessary to solving climate change but also essentially sufficient.26 Other economists argue that investments in public goods like basic knowledge and infrastructure might also be necessary, as well as measures to address equity and justice (such as investing the revenues from a carbon tax in a progressive way, having different carbon prices in different regions that collectively lead to the same globally optimal reductions that could be achieved with a single uniform global price, or even putting additional weight on co-benefits from air pollution reductions via climate policy in places where minorities have historically been unjustly saddled with disproportionately high exposure to pollutants). These additional measures would be taken on the grounds that climate policy will be enacted in a “nonideal”/“second-best” context in which background distortions, inequity, and injustice make them necessary to achieve the best outcome.27 But these measures are all part and parcel to well-regulated capitalism.

Furthermore, getting rid of capitalism would involve harm to the world’s poorest and most vulnerable people that could exceed the harm that is at stake for the world in connection with climate change and other environmental harms. Evidence for this claim is provided by taking the quantitative magnitude of health, wellbeing, and justice gains due to capitalism, according to the argument for premise 1 above, projecting trends into the future, and comparing these gains to the quantitative magnitude of health, wellbeing, and justice losses at issue in connection with climate change and other environmental harms, as provided by leading estimates.28 Again, according to the argument for well-regulated capitalism, the essence of our situation is that humanity is better off with our current flawed forms of capitalism than we would be without capitalism; however, we are not as well off as we could be if we properly regulated the externalities that are causing environmental harms, so there is no argument in favor of the status quo. Instead, we should properly regulate externalities, and thus move toward well-regulated capitalism, which would yield the optimal trade-off for humanity between the benefits of capitalism and the costs of pollution and other ills.

Viewed through the lens of the argument for well-regulated capitalism, other environmental challenges have a similar structure, such as food-systems challenges (including feeding the world without destroying the environment), air and water pollution, ensuring sustainable development for the world’s poorest, and other interrelated challenges at the environmental nexus. These problems are more complicated than climate change because they each involve multiple externalities and multiple background distortions, where the magnitude of those is sometimes highly location dependent, and issues of equity and justice are exceedingly complex. But the basic mechanisms for the best solutions are the same according to proponents of the argument for well-regulated capitalism, and indeed the best responses all require capitalism in order to work well and avoid a cure that is worse than the disease.

As a point of optimism in connection with these often-discouraging challenges, the relationship between the wealth of a society and environmental degradation often has an inverted U shape: As society initially gets wealthier, environmental degradation increases, until a point of peak degradation, after which the environment improves as society becomes rich enough to invest more and more in environmental quality rather than in basic needs. In the richest nations of the world, the peak of degradation arguably happened in the mid- to late twentieth century, and can be seen in measures of, for example, air and water pollution.29 In some emerging economies like China, there is hope that the peak has been reached and environmental degradation will now decline as society becomes richer and richer. For other developing nations, the peak has not been reached yet. Moreover, different forms of degradation (such as industrial air pollution and agricultural water pollution) might peak at different points within a nation. Putting this together, there is reason to hope that environmental challenges will reach a peak in our lifetime, and if we can meet them with well-regulated capitalism, they will begin to progressively improve over time in line with the end of extreme poverty for the entire world. Capitalism has brought these problems to a head because it has caused the world to get richer so quickly. But according to the argument for well-regulated capitalism, this is a good problem to have, as it is a symptom of a global society that is on the cusp of growing its way out of poverty and out of widespread environmental degradation. According to this argument, we should want to grow our way out of both of these problems as quickly as possible, rather than keep both problems around indefinitely by moving away from capitalism.30

## Con Con CP

**Con con will be unlimited and captured by special interests – can easily and arbitrarily pass sweeping changes to the entire constitutional order**

**Leachman 17**

Michael Leachman, Director of State Fiscal Research at the Center on Budget and Policy Priorities, David R. Super, Professor of Law at Georgetown University Law Center, “States Likely Could Not Control Constitutional Convention on Balanced Budget Amendment or Other Issues,” Center on Budget & Policy Priorities, January 18, 2017, https://www.cbpp.org/research/states-likely-could-not-control-constitutional-convention-on-balanced-budget-amendment-or

State lawmakers considering such resolutions should **be skeptical** of claims being made by groups promoting the resolutions (such as the American Legislative Exchange Council, or ALEC) that states **could control the** actions or **outcomes of a constitutional convention.** A convention likely would be **extremely contentious** and **highly politicized**, and its results impossible to predict.

A number of prominent jurists and legal scholars have warned that a constitutional convention could open up the Constitution to **radical** **and harmful changes.** For instance, the late Justice Antonin Scalia said in 2014, “I certainly would not want a constitutional convention. Whoa! Who knows what would come out of it?”[2] Similarly, former Chief Justice of the United States Warren Burger wrote in 1988:

[T]here is no way to **effectively limit** or muzzle the actions of a Constitutional Convention. The Convention could make its own rules and set its own agenda. Congress might try to limit the Convention to one amendment or one issue, but there is no way to assure that the Convention would obey. After a Convention is convened, it will be **too late to stop** the Convention if we don’t like its agenda.[3]

Such serious concerns are justified, for several reasons:

A convention could **write its own rules**. The Constitution provides no guidance whatsoever on the ground rules for a convention. This leaves wide open to political considerations and pressures such fundamental questions as how the delegates would be chosen, how many delegates each state would have, and whether a supermajority vote would be required to approve amendments. To illustrate the importance of these issues, consider that if every state had one vote in the convention and the convention could approve amendments with a simple majority vote, the 26 least populous states — which contain **less than 18 percent** of the nation’s people — could approve an amendment for ratification.

A convention could **set its own agenda**, possibly **influenced by powerful interest groups**. The only constitutional convention in U.S. history, in 1787, went **far beyond its mandate**. Charged with amending the Articles of Confederation to promote trade among the states, the convention instead wrote an entirely new governing document. A convention held today could set its own agenda, too. There is **no guarantee** that a convention could be limited to a particular set of issues, such as those related to balancing the federal budget. As a result, powerful, well-funded interest groups would surely seek to influence the process and press for changes to the agenda, seeing a constitutional convention as an opportunity to enact major policy changes. As former Chief Justice Burger wrote, a “Constitutional Convention today would be a **free-for-all** **for special interest** groups.” Further, the broad language contained in many of the resolutions that states have passed recently might increase the likelihood of a convention enacting changes that are **far more sweeping** than many legislators supporting these resolutions envision.

A convention could **choose a new ratification process**. The 1787 convention ignored the ratification process under which it was established and created a new process, lowering the number of states needed to approve the new Constitution and removing Congress from the approval process. The states then ignored the pre-existing ratification procedures and adopted the Constitution under the new ratification procedures that the convention proposed. Given these facts, it would be **unwise to assume** that ratification of the convention’s pro­posals would necessarily require the approval of 38 states, as the Constitution currently specifies. For example, a convention might remove the states from the approval process entirely and pro­pose a national referendum instead. Or it could follow the example of the 1787 convention and lower the required fraction of the states needed to approve its proposals from three-quarters to two-thirds.

No other body, including the courts, **has clear authority** over a convention. The Constitution provides for no authority above that of a constitutional convention, so it is not clear that the courts — or any other institution — could intervene if a convention did not limit itself to the language of the state resolutions calling for a convention. Article V **contains no restrictions** on the **scope of constitutional amendments** (other than those denying states equal representation in the Senate), and the courts generally leave such “political questions” to the elected branches. Moreover, delegates to the 1787 convention ignored their state legislatures’ instructions. Thus, the courts likely would not intervene in a dispute between a state and a delegate and, if they did, they likely would not back state efforts to constrain delegates given that delegates to the 1787 convention ignored their state legislatures’ instructions.

## Memo CP

#### Uncertainty is bad – studies prove that it wrecks R&D investment

**Lin et al. 21** --- School of Law, Southwestern University of Finance and Economics, Chengdu.

Yuchen, Daxin Dong, Jiaxin Wang, “The Negative Impact of Uncertainty on R&D Investment: International Evidence,” International Evidence, Sustainability 2021, 13, 2746. https://doi.org/10.3390/ su13052746

In summary, in this study, we reported a significantly negative impact of uncertainty on R&D investment at the country level. The analyses were based on a sample covering 109 countries from 1996 to 2018. It was also found that uncertainty reduced the number of annual new patent applications. The adverse impact of uncertainty on R&D was not only significant statistically, but also economically. According to the estimation results, if the uncertainty index rises by one unit (one standard deviation), the scale of R&D investment and the number of patent applications will decline by 15.6% (2.1372%) and 22.7% (3.1099%), respectively. Further analyses demonstrated that the effect of uncertainty was not uniform across all countries. In some country groups, the effect was strong and statistically significant. However, in several country groups, the effect was moderate and insignificant. However, we always observed a negative effect. Overall, Hypothesis 1 in our study is verified, and Hypothesis 2 is contradicted.

The study results provided strong support to some previous studies which reported a negative impact of uncertainty on R&D investment, including Arif Khan et al. [5], Cho and Lee [11], Czarnitzki and Toole [8], Goel and Ram [12], Ivus and Wajda [1], Jung and Kwak [15], Nan and Han [17], Wang et al. [4], and Xu [20]. The results did not support several studies that reported a positive effect of uncertainty, such as Atanassov et al. [3], Gu et al. [13], Han et al. [14], Jiang and Liu [6], Meng and Shi [16], Ross et al. [9], Stein and Stone [18], Tajaddini and Gholipour [7], and Vo and Le [19]. Our study utilized a wide sample of more than 100 countries and examined the country-level aggregate R&D investment. This feature enabled our study to better depict the overall situation in the world, compared to most of the extant studies, which have only focused on the R&D of business corporations within one country.

The findings in this study have important policy implications. First, in order to keep abreast of the R&D investment dynamics, governments and economic agents should pay attention to the degree of uncertainty in the economy. The negative impact of uncertainty on R&D is a phenomenon that widely exists in different countries over the world, as shown by our analyses on the full sample, as well as various subsamples. If governments can effectively monitor the variations in uncertainty and evaluate the relevant market responses, they will be able to understand the current situation and forecast future tendency of aggregate R&D investment in a better way. Being more informed will facilitate governments to make proper public policies if necessary. After understanding the link between uncertainty and R&D, firms can reasonably expect that other enterprises in the industry will adjust investment accordingly when uncertainty changes. During the procedure of making their own R&D investment plans, firms should not neglect the potential responses of the competitors and partners to varying uncertainty.

Second, given the importance of innovation and technological advancement for sustainable economic and social development, it is necessary to reduce the degree of macro uncertainty. Governments should avoid frequent variations of economic policies and the abrupt implementation of substantial reforms. The communication and information sharing among governments and private sectors should be reinforced to reduce noises, mitigate misunderstanding, and enhance trust and confidence. Countries should also improve their institutional and economic infrastructure—for example, by reducing frictions in financial markets and strengthening governmental effectiveness—in order to increase the resistibility of economic system to unexpected shocks. In the case that the major origins of the uncertainty can be identified—such as the coronavirus pandemic in the current period—urgent actions should be carried out to deal with the problems

## Court Clog

#### Litigation inevitable

**Diessel et al. 22** – Benjamin H. Diessel is a partner at Wiggin and Dana LLP; Robert M. Langer is senior counsel at Wiggin and Dana LLP; Zeynep E. Aydogan is an associate at Wiggin and Dana LLP

Benjamin Diessel, Robert Langer, and Zeynep Aydogan, "FTC Merger Policy Shifts May Spur Uncertainty And Risk," Law360, 1-14-2022, https://www.law360.com/corporate/articles/1455070/ftc-merger-policy-shifts-may-spur-uncertainty-and-risk

The Federal Trade Commission has recently taken bold measures to reshape its enforcement priorities for review of mergers and acquisitions.

The FTC shares jurisdiction over such reviews with the U.S. Department of Justice. Accordingly, new policies have historically been adopted jointly by the FTC and DOJ. Several recent actions of the FTC, however, have been undertaken unilaterally in a stark departure from that tradition.

First, the FTC unilaterally resurrected a long-abandoned practice of requiring prior approval policies in connection with certain transactions.

Second, the commission unilaterally withdrew the vertical merger guidelines that it had adopted jointly with the DOJ in 2020.

Finally, the commission announced that it would start issuing warning letters to parties to potential transactions, increasing the possibility that transactions may be subject to action even beyond the expiration of the 30-day waiting period.

This interagency split could have profound implications for how transactions are reviewed and whether they are approved. The potential tension comes at an unfortunate time, coinciding with exponential increases in transactions reportable under the Hart-Scott-Rodino Act.

This resulting opacity in the merger review processes exercised by the two agencies will require additional care by companies charged with navigating through the mergers and acquisitions process and managing antitrust-related risk.

Reissuing Prior Approval Policies

On Oct. 25, 2021, the FTC unilaterally issued a policy statement that effectively resurrected its pre-1995 practice of requiring prior approval policies.[1]

This policy requires all parties that enter into a merger consent agreement to agree that they will obtain prior approval for at least 10 years before closing any future transaction affecting a relevant market. Under the policy, the FTC may seek prior approval for a future transaction even if the parties abandon that transaction.

By contrast, the DOJ continues to operate under its extant prior notice requirements.

Two dissenting commissioners, Christine Wilson and Noah Phillips, issued a statement on Oct. 29, cautioning about the "chilling" effect that "it will have on mergers and acquisitions activity in the United States."[2]

The statement emphasized the "divergence" that the FTC's actions are causing between it and the Antitrust Division of the DOJ.

Withdrawal of the Vertical Merger Guidelines

On Sept. 15, 2021, the FTC voted to rescind the joint FTC-DOJ ~~vevrtical~~ [vertical] merger guidelines. Shortly thereafter, the DOJ issued a press release indicating that the vertical merger guidelines remain in place at the department.[3]

Phillips and Wilson characterized the FTC's decision to withdraw the vertical merger guidelines as an attempt to "pull the rug out from under the honest businesses and lawyers who advise them."[4]

They wrote that "the Majority's decision to withdraw the Vertical Merger Guidelines adds to the divide between enforcement at the FTC and the Department of Justice,"[5] and invoked long-standing "concerns about different procedures at the agencies."[6]

The dissenting commissioners stated that "unless the DOJ similarly eschews the 2020 Guidelines, a new schism will appear."[7]

They expressed concern that the FTC's decision to withdraw the guidelines adds to the divide between enforcement at the FTC and the DOJ, in light of the "concerns about different procedures at the agencies and perceived differences in the standards for an injunction."[8]

If, as predicted by some, the FTC's rescinding of the vertical merger guidelines indicates that it will more aggressively challenge vertical transactions than the DOJ, parties to potential vertical transactions will need to analyze and account for that risk.

Warning Letters Issued by the FTC

On Aug. 3, 2021, the FTC announced that it would begin to issue warning letters to companies to reported transactions when the commission cannot fully investigate within the requisite timeline. The FTC indicated that the warning letters would serve to notify the parties that the FTC's investigation remains open even beyond the HSR waiting period, alerting parties of the risk that the FTC may subsequently determine that the transaction is unlawful.[9]

The FTC's announcement of its practice to start issuing warning letters stands in sharp relief with both agencies' prior practices of rarely challenging consummated transactions. Notably, the DOJ has issued no similar guidance.

This apparent split introduces further uncertainty to parties and counsel navigating through transactions by increasing the risk of post-consummation investigations. Wilson has warned that the new policy will "raise the costs of doing mergers and threaten[s] to chill harmful and beneficial deals alike."[10] Wilson expressed concern "that the carefully crafted HSR framework is suffering death by a thousand cuts."[11]

#### Aff’s shift to regulatory model frees up resources

Chopra, Commissioner, Federal Trade Commission, and Khan, FTC Chair, Academic Fellow, Columbia Law School; Counsel, Subcommittee on Antitrust, ‘20

(Rohit and Lina, “The Case for “Unfair Methods of Competition” Rulemaking,” 87 U. Chi. L. Rev. 357)

Second, establishing rules could help relieve antitrust enforcement of steep costs and prolonged trials. Identifying ex ante what types of conduct constitute “unfair method[s] of competition” would obviate the need to establish the same exclusively through ex post, case-by-case adjudication. Targeting conduct through rulemaking, rather than adjudication, would likely lessen the burden of expert fees or protracted litigation, potentially saving significant resources on a present-value basis.47

Moreover, establishing a rule through APA rulemaking can be faster than litigating multiple cases on a similar subject matter. For taxpayers and market participants, the present value of net benefits through the promulgation of a clear rule that reduces the need for litigation is higher than pursuing multiple, protracted matters through litigation. At the same time, rulemaking is not so fast that it surprises market participants. Establishing a rule through participatory rulemaking can often be far more efficient. This is particularly important in the context of declining government enforcement relative to economic activity, as documented by the ABA.48

## Ptx DA

#### It’s super bipartisan and semiconductor subsidies are inevitable, but it’ll be weeks before there’s a deal

Flatley 3/28 – Reporter for Bloombgerg.

Daniel Flatley, “Senate Passes China Competition Bill to Start Talks With House,” *Bloomberg*, 28 March 2022, https://www.bloombergquint.com/china/senate-passes-china-competition-bill-to-start-talks-with-house.

The Senate Monday passed its version of a long-stalled bill to aid the domestic semiconductor industry and bolster U.S. competitiveness with China, a key step needed to kick off negotiations with the House on final legislation.

The Senate voted 68-28 for the plan, which includes $52 billion in grants and incentives to bolster chip manufacturing as well as provisions aiming to jump-start innovation and bring key industries back to the U.S. amid a global supply chain crunch.

“America cannot afford to come in second place when it comes to technologies like 5G, AI, quantum computing, semiconductors, bio-engineering and so much more,” Senate Majority Leader Chuck Schumer said before the vote “This bill is a necessary step towards securing the bright future of American ingenuity which has always helped us lead the way.”

Chinese Foreign Ministry spokesman Wang Wenbin said Tuesday at a regular press conference in Beijing that the bill “hyped up the China threat theory.” The U.S. should work to uphold the stability of global industrial supply chains, including in the semiconductor industry, instead of making issues out of China and seeing China as an imaginary enemy,” he added.

Schumer introduced the original version of the bill with Senator Todd Young, an Indiana Republican, last year. Despite backing from the semiconductor industry and the White House, the legislation was left in limbo as the House took a different approach on how to encourage innovation and manufacturing. The Senate focused on developing new technology while the House emphasized basic research and development.

Both the House and Senate versions of the legislation include $52 billion in emergency appropriations for semiconductor manufacturers, which have publicly pushed Congress as they prepare to invest in chip manufacturing facilities in states that include Arizona, Texas, Ohio and New York.

Schumer and House Speaker Nancy Pelosi can now begin the process for negotiating a compromise that can draw enough support to pass in both chambers. But a final measure is unlikely to be completed before the end of May.

#### SCOTUS vote is top of the agenda

Kim and Wang 3/30 – Seung Min Kim is a White House reporter for WaPo. Amy B. Wang is a national politics reporter for WaPo.

Seung Min Kim and Amy B. Wang, “Collins says she will back Ketanji Brown Jackson for Supreme Court,” *The Washington Post*, 30 March 2022, https://www.washingtonpost.com/politics/2022/03/30/susan-collins-ketanji-brown-jackson-vote/.

The Senate Judiciary Committee is scheduled to vote on Jackson’s nomination on Monday, triggering a timeline that would put the judge on track to be confirmed to the Supreme Court as early as the following Thursday or Friday, as long as enough Democratic senators are healthy and present.

#### Antitrust is bipartisan – current calls to regulate big tech prove

Zakrzewski 10/14/2021 – technology policy reporter

Cat, “Senators aim to block tech giants from prioritizing their own products over rivals’” WaPo, 10/14/2021, <https://www.washingtonpost.com/technology/2021/10/14/klobuchar-grassley-antitrust-bill/>

A bipartisan group of senators plans to introduce a bill that they say would prevent tech platforms from using their power to disadvantage smaller rivals, signaling growing momentum in Congress to rein in Silicon Valley giants.

Sens. Amy Klobuchar (D-Minn.), chair of the Senate Judiciary Committee’s antitrust subcommittee, and Charles E. Grassley of Iowa, the top Republican on the Senate Judiciary Committee, announced that they will introduce legislation early next week making it illegal for Amazon, Apple, Facebook and Google to engage in “self-preferencing,” the tech giants’ practice of giving their own products and services a boost over those of rivals on their platforms.

The bill would effectively outlaw an array of behaviors that lawmakers describe as anticompetitive, like Amazon sucking up data from sellers on its platform to copy the products in-house or Google prioritizing its own services over rivals’ in search results.

Klobuchar said in an interview that the bill reflects a growing realization that competition laws, like the Sherman Act of 1890, which prohibits anticompetitive agreements and attempts to monopolize markets, need to be updated for the digital era. (Amazon founder Jeff Bezos owns The Washington Post.)

The American Innovation and Choice Online Act “really gets at the exclusionary conduct so unique to dominant platforms,” she said. “If there had been an Internet when Sen. Sherman was representing Ohio in the Senate, maybe they would have included this.”

The bill comes as recent cases targeting tech giants have tested existing antitrust laws. Advocates for tech regulation say legislation is needed because laws written in the era of railroads and oil barons are not equipped to address the unique ways that Silicon Valley can harm competition and consumers. Both Facebook and Apple have scored courtroom victories in recent months in high-profile antitrust cases.

The bill is widely viewed as a bellwether of whether Republicans and Democrats will be able to convert the mounting bipartisan animosity toward the tech industry into new laws. House lawmakers have already passed a companion version of this bill through the Judiciary Committee, and it awaits a vote on the House floor. The Klobuchar bill highlights the mounting bipartisan interest in both chambers of Congress in overhauling competition law to target the practices of a handful tech giants.

Klobuchar said the White House has also remained “informed” of her office’s work on the bill, as competition policy has emerged as a key focus of the administration. White House press secretary Jen Psaki said last week that President Biden “looks forward” to working with Congress on tech regulation, including antitrust legislation.

The bill’s announcement invited backlash from industry-backed groups arguing that, if passed, it would have a detrimental impact on tech companies. The bill would take a “hammer” to products that consumers love, said Adam Kovacevich, chief executive of the Chamber of Progress, an industry coalition that counts Google, Amazon and Facebook among its partner companies.

“Preventing Amazon from selling Amazon Basics and banning Google’s maps from its search results isn’t going to do anything to make the Internet better for families,” he said. “This is like calling a car mechanic to fix your laptop.”

Advocates for breaking up large tech companies praised the bill and said the recent bipartisan vote backing tech critic Lina Khan to serve on the Federal Trade Commission underscores there’s willingness in both parties to pass antitrust legislation. But they say this should only be the beginning of Congress’s work on these issues.

“The Senate must continue to reassert its power over the handful of men whose corporations undermine economic dynamism, eviscerate the free press, and threaten our democracy itself,” said Sarah Miller, executive director of the American Economic Liberties Project, a nonprofit organization that advocates for aggressive antitrust enforcement.

The Senate Judiciary antitrust subcommittee has hosted several related hearings, during which they’ve questioned witnesses on ways that the tech giants supposedly use their grip on the smart home or app stores to limit competition. Klobuchar noted that these concerns date back to the previous Congress, when a Republican-controlled committee hosted a hearing on self-preferencing, and lawmakers heard testimony from Google critic Yelp.

“Through it all was a common theme about how the dominant platforms were advantaged because they could exclude competitors as only a dominant platform can,” Klobuchar said.

A news release about the forthcoming legislation said it would give enforcers “strong, flexible tools to deter violations,” including steep fines of up to 15 percent of a company’s revenue during the time it was violating the legislation.

The bill also targets much of the conduct that was raised by House lawmakers last year in the findings of their more than year-long investigation into power in the tech industry.

## DOJ

#### No link – plan is enforced through the FTC – that’s Rogers and Shelanski [reinserted below]

Rogerson, Charles E. and Emma H. Morrison Professor of Economics at

Northwestern University. He has previously served as Chief Economist of the Federal Communications Commission, and Shelanski, Professor of Law at Georgetown University and a member of the firm Davis Polk & Wardwell LLP. He has formerly served as Director of the Bureau of Economics at the Federal Trade Commission and as Chief Economist of the Federal Communications Commission, ‘20

(William and Howard, “Antitrust Enforcement, Regulation, and Digital Platforms,” 168 U. Penn. L. Rev. 1911)

There are several possible sources for digital platform regulation. Congress could enact new legislation that creates an entirely new regulatory agency for digital platforms or could give new statutory authority to an existing agency. Alternatively, the FTC could promulgate competition rules under authority that it arguably already has under the FTC Act of 1914. Several commentators have argued that the FTC could use its existing statutory authority under the FTC Act to issue broad, antitrust rules that apply generally, to all industries.16 A much more limited, and perhaps less controversial, manner in which the FTC could begin to use this authority would be to pass narrower rules that apply only to specific kinds of conduct and only to digital platform industries. Calls to regulate digital platforms involve several issues that do not centrally fall within the purview of antitrust, notably privacy and control over certain kinds of harmful content.17 To the extent there could be trade-offs among regulatory goals—for example between a platform’s interconnecting with rivals but limiting those rivals’ access to user data, or between providing nondiscriminatory access to thirdparties but blocking those that spread harmful content—there could be economies of scope to having a single agency address those issues, or at least mandating that agencies coordinate inter-related rulemaking.

#### Fiat solves – new authority comes with new funding authorization

Bannan is policy counsel at New America’s Open Technology Institute, focusing on platform accountability and privacy, and Gambhir, New America's Open Technology Institute, ‘21

(Christine and Raj, “Does Data Privacy Need its Own Agency?” <https://d1y8sb8igg2f8e.cloudfront.net/documents/Does_Data_Privacy_Need_its_Own_Agency.pdf>)

Proposals delegating privacy law enforcement to the FTC generally bolster an existing bureau or establish a new bureau within the agency. Senator Wyden’s Mind Your Own Business Act of 2019 would create a new 50-person Bureau of Technology within the FTC and add 125 employees to the Bureau of Consumer Protection—100 of whom would do privacy enforcement work.102 This would bring the total number of FTC employees doing privacy enforcement work up to about 190. While the Wyden bill does not provide figures for how much adding 175 new employees would cost, former FTC Chairman Joseph Simons estimated that a $50 million budget increase from Congress would enable the FTC to hire 160 new staff.103 Under this proposal, the number of employees working on privacy would more than triple. However, it would still only be about one-tenth the size of the Eshoo-Lofgren DPA proposal.

#### No link uq—DOJ already going after big tech

Taylor Hatmaker, Tech Crunch, Biden taps Google critic to lead the DOJ’s antitrust division, 7/20/21, <https://techcrunch.com/2021/07/20/biden-jonathan-kanter-doj/>

The Justice Department already has a major antitrust suit against Google in the works. The lawsuit, filed by Trump’s own Justice Department, accuses the company of “unlawfully maintaining monopolies” through anti-competitive practices in its search and search advertising businesses. If successfully confirmed, Kanter would be positioned to steer the DOJ’s big case against Google.

In a 2016 NYT op-ed, Kanter argued that Google is notorious for relying on an anti-competitive “playbook” to maintain its market dominance. Kanter pointed to Google’s long history of releasing free ad-supported products and eventually restricting competition through “discriminatory and exclusionary practices” in a given corner of the market.

Kanter is just the latest high-profile Big Tech critic that’s been elevated to a major regulatory role under Biden. Last month, Biden named fierce Amazon critic Lina Khan as FTC chair upon her confirmation to the agency. In March, Biden named another noted Big Tech critic, Columbia law professor Tim Wu, to the National Economic Council as a special assistant for tech and competition policy.

All signs point to the Biden White House gearing up for a major federal fight with Big Tech. Congress is working on a set of Big Tech bills, but in lieu of — or in tandem with — legislative reform, the White House can flex its own regulatory muscle through the FTC and DOJ.

# 1AR

## Case

#### There is no right option in the context of AI – the only certainty we have is Russian and Chinese control of AI would be far worse

Lowther and McGiffin 19 – Dr. Adam Lowther is Director of Research and Education at the Louisiana Tech Research Institute (LTRI) where he teaches deterrence strategy, NC3 History, and Integrated Tactical Warning and Attack Assessment in several nuclear command, control, and communication courses for the U.S. Air Force. Curtis McGiffin is Associate Dean, School of Strategic Force Studies, at the Air Force Institute of Technology.

Adam Lowther and Curtis McGiffin, August 16 2019, “AMERICA NEEDS A “DEAD HAND”,” War on the Rocks, https://warontherocks.com/2019/08/america-needs-a-dead-hand/

However, artificial intelligence is no panacea. Its [failures are numerous](https://medium.com/syncedreview/2018-in-review-10-ai-failures-c18faadf5983). And the fact that there is profound concern by well-respected experts in the field that science fiction may become reality, because artificial intelligence designers cannot control their creation, should not be dismissed. For the United States, every option presents significant risk and uncertainty. Reality, however, is progressing to a point where the United States must address the challenge we outlined above. Russia and China are not constrained by the same moral dilemmas that keep Americans awake at night. Rather, they are focused on creating strategic advantage for their countries.

#### High tech warfare means defense doesn’t apply

Saalman, 18

Lorea Saalman, EastWest Institute Asia-Pacific Program Vice President, “"Fear of false negatives: AI and China's nuclear posture"; Bulletin of the Atomic Scientists. April 2018. https://thebulletin.org/2018/04/fear-of-false-negatives-ai-and-chinas-nuclear-posture

New pockets of excellence. In its relations with Russia and the United States, China has long contended with nuclear asymmetry. AI and autonomy, in contrast, offer Beijing the long-term potential to disrupt Washington’s traditional strengths. They open the door for swarm and other technologies that could overwhelm conventional and nuclear platforms that are larger, more cumbersome, and less agile. While China may be concerned about potential adversaries tracking its own nuclear platforms and systems, Beijing is just as likely to avail itself of these relatively inexpensive methods of disrupting US activities. Also, Chinese publications indicate that Beijing is building autonomy into its own “bolt-out-of-the-blue” systems, for example in hypersonic glide vehicles such as the DF-ZF. As China debates integration of automation via launch-on-warning, doing so with a greater range of AI and autonomy in its tool kit could lead to destabilizing trends. Again, the most sensational advances in these enabling technologies do not necessarily carry the greatest implications for China’s military and nuclear force structure. Instead, what counts is the level of AI and autonomy introduced into Beijing’s command and control structure.

When it comes to platforms, this author’s preliminary review of Chinese technical writings on AI and autonomy reveals that Beijing’s greatest emphasis, at least where the most flexible systems are concerned, is on unmanned aerial and underwater vehicles. In China’s view, these systems can be leveraged for a range of activities, including enhanced accuracy in: battlefield reconnaissance, surveillance, patrolling, electronic reconnaissance, communications, electronic interference, combat assessment, radar deception, projectile firearms, laser guidance, target indication, precision bombing, interception and launch of tactical missiles and cruise missiles, and anti-armor, anti-radiation, and anti–naval vessel capabilities; as well as nuclear, chemical, and biological detection and operations. When the topic turns to leveraging new means of warfare, Chinese writings discuss the use of swarm systems (link in Chinese) for a number of purposes, with battlefield applications focusing on anti-submarine warfare and countering integrated air defense.

AI and autonomy provide China an opportunity to exploit a new pocket of excellence, but they are hardly ends in themselves. This is one of myriad reasons that China has been reluctant to engage in arms control efforts to constrain the deployment of autonomous systems. Moreover, the amount of Chinese research already being conducted in this arena, particularly at the university level, is substantial. Research is unlikely to diminish any time soon. (Programs on AI and autonomy receive ample government support through such funds as the Laboratory of National Defense Technology for Underwater Vehicles, Project for National Key Laboratory of Underwater Information Processing and Control, National Key Basic Research and Development Program, China Aviation Science Foundation, National Science and Technology Major Project, National 973 Project, National Key Laboratory Fund, National “863” High-tech Research and Development Program, and Ministry of Communications Applied Basic Research Project, among a number of others.)

Expansive programs to turn AI and autonomy into a weaponized reality, even in challenging or illusory domains such as underwater swarms, indicate the emphasis this research receives within the hierarchy of Chinese defense planning. Whether or not China is able to achieve all of these capabilities, the vast resources and manpower allocated to these endeavors merit great attention by the United States. The direct implications of aerial and underwater swarms for larger, more lumbering US nuclear and conventional platforms remain to be seen. However, if the US Congress provides funding for the low-yield submarine-launched ballistic and cruise missiles proposed under the 2018 Nuclear Posture Review, China could deploy swarms to track and potentially intercept US dual-capable platforms. In short, whether intentionally or unintentionally, an escalatory scenario could develop.

The evolution of smaller platforms mobilized in joint formations could turn China’s nuclear asymmetrical disadvantage on its head. Much like decoys, which can be used as an inexpensive means of confusing and saturating missile defenses, low-cost swarms of unmanned aerial and underwater vehicles, along with cyber technologies, could provide a “guerilla combat–style” advantage against systems that the United States sees as providing an element of surprise, speed, and precision. Some of these platforms are already destined for deployment and will provide China with greater capability to monitor US activities in the Asia-Pacific region. However, if these platforms are turned toward actual engagement—in efforts to disrupt or confront lower-yield, smaller-scale US nuclear or dual-capable platforms—the potential for miscalculation may grow.

If China enhances its development of cruise missiles and hypersonic glide platforms by applying AI and autonomy, close-range encounters off the coast of Taiwan and in the East and South China Seas could grow even more complicated. China’s ground-launched DH-10 missile is believed to carry a conventional warhead, but indications have emerged that the air-launched CJ-10 may have both nuclear and conventional variants. Moreover, China has hedged on what kind of payload will be carried by hypersonic glide platforms such as the DF-ZF, which are designed to break through missile defenses. With the release of the 2018 Nuclear Posture Review and Vladimir Putin’s subsequent declaration that Russia has developed new nuclear weapons, the United States and Russia have engaged in a game of tit-for-tat. If China follows suit, a new set of destabilizing variables could be introduced into a region that is already tense and crowded, with freedom-of-navigation operations carried out among competing territorial claims.

From asymmetry, advantage. Within this environment, China’s integration of AI and autonomy aligns with its attempts to avoid being surprised by a false negative. Though the United States and Russia are both trending toward intentional escalation in their official doctrines, China’s response to this trend indicates a desire to avoid getting dragged into a nuclear arms race. Nonetheless, Beijing’s assumptions about US preemptory behavior have shaped its efforts to leverage its nuclear asymmetry into an advantage. One significant step in this direction comes through greater Chinese integration of AI and autonomy, meant to mitigate the risk of being caught off guard, whether by a conventional or nuclear system. While some aspects of this dynamic have stabilizing potential—as is true of enhanced situational awareness—strong indications suggest that China is engaged in other pursuits that could lead to miscalculation at the conventional and nuclear level.

#### Legislators are too divided to pass antitrust legislation

Kang and McCabe 21 – Cecilia Kang covers technology and regulatory policy out of Washington for the NYT. David McCabe covers technology policy for the NYT.

Cecilia Kang and David McCabe, “Antitrust Overhaul Passes Its First Tests. Now, the Hard Parts,” *The New York Times*, 24 June 2021, https://www.nytimes.com/2021/06/24/technology/antitrust-overhaul-congress.html.

Six bills that could reshape the power of the tech industry passed an important hurdle in the House. But the outcomes of the votes, and the debates before they took place, also showed divisions among lawmakers — and underscored why final passage of the package is expected to be difficult.

In a marathon session of debate and voting that started Wednesday morning and continued into Thursday, the Judiciary Committee advanced the suite of bills, which are meant to weaken the dominance of Big Tech. The bills would bulk up antitrust agencies, make it harder to acquire potential rivals and prevent platforms from selling or promoting their own products to disadvantage competitors.

Democrats, who have had the most say over the bills and who overwhelmingly support the proposals, are focused on the market power of Amazon, Apple, Facebook and Google. Representative Jerrold Nadler of New York, the Democratic chairman of the committee, said the votes “pave the way for a stronger economy and a stronger democracy for the American people by reining in anticompetitive abuses of the most dominant firms.”

A handful of Republicans joined Democrats in approving the proposals. Those Republicans argue that the proposals would help address one of their main concerns: the power that social media companies have over speech, and what they argue is political bias and censorship of conservative voices.

But many other Republicans say that the bills only add more government intervention while not directly addressing their concerns about free speech.

That debate within the Republican Party spilled out on Wednesday as soon as the first bill was brought up for a vote. The proposal, considered among the least contentious of the six, would increase the costs of fees associated with some mergers to help raise more funding for the Federal Trade Commission and the Department of Justice, which regulate deals.

During a three-hour debate about the bill, Representative Jim Jordan of Ohio, the top Republican on the committee, said it was a power grab for the Democrat-led antitrust agencies, making them bigger and more influential. He also said the antitrust bills failed to address the ability of Facebook and other social media companies to cut off political voices.

“Big tech censors conservatives,” Mr. Jordan said, a claim he has made repeatedly even though data shows that many conservative personalities thrive on social media. “These bills don’t fix that problem; they make it worse.”

Representative Ken Buck of Colorado, a fellow Republican and a co-sponsor of the bills, agreed that the tech companies silence conservatives. But he implored his party for unity to take on the power of Big Tech, saying the proposals would limit the overall power of the companies.

“These bills are conservative,” Mr. Buck said.

While progressive lawmakers largely back the bills, the proposals have frustrated Democratic lawmakers from California, who say they go too far in regulating their state’s most prominent companies.

Representative Lou Correa, a Democrat from Southern California, said that the number of people in the state working for the big tech companies had grown substantially, helping to fund services like public education and support for people affected by Covid.

“These firms — high tech — are the reason California has a budget surplus, as opposed to a deficit,” he said, adding later: “We want to make sure that we don’t kill the goose that lays the golden eggs.”

Other California Democrats who expressed concerns about the bills included Representative Zoe Lofgren, whose district includes part of San Jose, and Representative Eric Swalwell.

Ms. Lofgren worried during the hearing that the bills could ensnare companies that do not share the tech giants’ immense scale. Mr. Swalwell said before the hearing even began that he would oppose several of the bills.

“In my district alone, I represent thousands — likely in the five digits — of employees affected by the proposed laws,” he said. “It is these people whose jobs, families and livelihoods I was elected to protect — and must advocate for today.”

The committee’s passage of the bills kicks off a much harder process. Eight Democratic lawmakers have asked Speaker Nancy Pelosi, who has tremendous sway over when bills are taken up in the full House, to slow the process. The lawmakers repeated arguments made by companies like Apple that the bills could open up security and privacy vulnerabilities for customers.

Ms. Pelosi said at a Thursday news conference that she had told concerned tech companies to substantively participate in the process of crafting the legislation as it moved through the House, but she noted that lawmakers from both parties had grown concerned about Silicon Valley’s power.

“They can put forth what they want to put forth,” she said. “But we’re not going to ignore the consolidation that has happened and the concern that exists on both sides of the aisle.”

The challenge is even stiffer in the Senate, where the bills will each require significant Republican support to reach the 60 votes needed to override the legislative filibuster. A few Republicans, including Josh Hawley of Missouri, have pressed for stiffer antitrust laws. But it is unclear whether many more will join him.

Some bills, like the one to generate more money for regulators, could face less resistance than others. The committee approved that bill on Wednesday by a vote of 29 to 12. The sixth and final bill, a measure that could break apart elements of the tech giants’ businesses, was approved on Thursday afternoon 21 to 20.

“We think it’s an uphill climb for the toughest bills,” said Paul Gallant, a research analyst at Cowen and Company. “The Senate filibuster is always the highest hurdle, and I suspect it will hold back the toughest of these bills. But the House is going faster and farther against tech than anyone expected.”

## K

#### Alt alone is the worst of all worlds – rejecting neoliberalism in all instances guarantees war

Coniglio, antitrust attorney in the Washington, DC office of Sidley Austin LLP, ‘20

(Joseph V., “Economizing the Totalitarian Temptation: A Risk-Averse Liberal

Realism for Political Economy and Competition Policy in a Post-Neoliberal Society,” 59

Santa Clara L. Rev. 703)

Before evaluating each of these specific forms of competition policy, it is worth developing the normative criteria by which such an analysis will be conducted-that is, "risk-averse anti-totalitarian liberal realism., 7 2 Although the limits of this article make a full exegesis of these first principles impracticable, a few key premises can be said plainly. 73 The first is that the lessons of the twentieth century teach us that societies should avoid totalitarian forms of political economy so as to not repeat the atrocities that regimes of this kind have committed.74 Policymakers of goodwill across the political spectrum should be unified in seeking to articulate a paradigm that overcomes these revolutionary forces so as to protect individual liberty, support continued economic growth, and foster technological progress.

The "risk-averse" nature of this anti-totalitarianism also grounds arguments against classical liberalism and progressivism as organizing principles for competition policy. At the institutional level, as noted above, while classical liberalism is historically consistent with the dominance of both concentrated corporate power and a plutocratic class, the ideal of classical liberals would typically include neither welfare nor administrative states. As such, classical liberalism would provide an effective check against socialism and revolution from below, which could seek to make use of both the welfare and administrative states for its ends.75 However, the wholesale dismantling of both the welfare and administrative states could dangerously increase the risk of a revolution from above by removing the institutional powers able to counterbalance any alliance between established wealth and concentrated corporate power seeking to use fascism as a way to protect their economic interests but to the grave detriment of the rest of society.76

Progressivism, by contrast, sees powerful administrative and welfare states as necessary to protect the interests of the working classes, and is hostile to the existence of both plutocratic and concentrated corporate power. In the United States, the paradigmatic progressive political program was the New Deal. Whereas the first part of the New Deal included a host of regulations empowering the administrative state and placing regulatory obligations on business, the second part of the New Deal included Social Security and tax increases.77 Even though progressivism might therefore provide an adequate check against the imposition of fascism by an alliance of private power, the elimination of any substantial checks against the abuse of public power risks progressive institutions being utilized by intellectual elites rousing the working classes to bring about, and achieve power in, a socialist political economy.79

In addition to this risk aversion to totalitarian political economy, a certain realism about the present historical moment represents another basis for critiquing some of the theories of competition policy discussed above. While Burke's "age of chivalry" may be lost and utopia never to come, humanity lives better than it once did, and that should count for something. This is to say that, in lieu of believing that a liberal and democratic end of history remains the birthright of all mankind, or attempting to turn back globalization, policymakers should be concerned about losing what unprecedented but fragile progress modernity has actually made in improving the lives of many, many millions who were once in poverty both in the West and around the world.

The hyper-neoliberal approach-namely, that increased technological progress will prove a sufficient condition for sustaining the neoliberal order-can be faulted on these realist grounds, as the full implications of the New Economy and on liberal economic order are not yet fully understood. It may be that the golden age of technological progress and economic growth is already gone and therefore of little promise toward continued middle class expansion. ° It may be that the social consequences of rapid innovation in the Internet economy are in large part increased group polarization and extremism that, in a heterogeneous society, ultimately leads to fragmentation, violence, and the breakdown of liberal economic order.8' Finally, it may be that even notwithstanding a liberal effect of democratizing access to ideas, goods, and people, a reinvigorated bureaucracy concerned about me- quality chills continued technological progress.82 All of these possibilities, and still many more, make the hyper-neoliberal paradigm too speculative for policymakers to stake the future of liberal economic order on.

An unabashed program of industrial policy, by contrast, suffers from a more subtle form of idealism. On the one hand, the recognition of nation states as self-interested actors in competition with one another within a sovereignty-based framework has long been a dominant view for thinking about international order in "realist" terms.83 Over the neoliberal period, however, the immersion of the contemporary nation state within a globalized economy of ideas, goods, people and supply chains has resulted in not only unprecedented economic growth and prosperity around the world, but relative peace.84 A turn toward industrial policy, even in the limited case of antitrust, risks contributing to the undermining of not only economic growth and neutral rules-based legal frameworks-such as antitrust as an apolitical, value neutral, and technocratic enterprise 8 5 -but also global peace and stability, with potentially destructive consequences for humanity similar to those that obtained prior to the advent of the liberal international order.

#### Info and incentives – govts don’t have the knowledge or motive to pick the best tech in advance

**Karlson et al. 20** --- Ratio Institute, Linköping University, Stockholm, Sweden.

Nils, Christian Sandström, & Karl Wennberg, 2020, “Bureaucrats or Markets in Innovation Policy? – a critique of the entrepreneurial state,” The Review of Austrian Economics, vol. 34, pg. 81–95.

Information problems concern the difficulty a public actor face in collecting the information and acquiring the knowledge enabling correct decision-making regarding, for example, the allocation of resources. As Hayek (1945) showed, it is practically impossible to aggregate information and knowledge about production conditions, business opportunities, customer preferences, etc. to any central unit in society. Such information is dispersed, local, and time-bound in character, even in today’s modern digital economy. With regard to innovation policy and the results reviewed above, there are numerous implications of Hayek’s argument.

First, the existence of a market failure is empirically difficult to prove, or measure. The original argument by Arrow (1962) was of a theoretical nature and has not been validated. One could expect the potential size of such a market failure to vary greatly depending upon institutional characteristics, industrial context, regional and national setting. Such differences along with the fact that it is a very methodologically challenging task to locate and compute the size of a market failure means that policymakers are put in the awkward position of trying to solve a problem that is unknown both in terms of its existence, size and location. Needless to say, such a situation is almost bound to result in malinvestments.

The second implication concerns that a market economy is more compatible with the notion of dispersed knowledge than a public policy intervention. Industrial development in a market economy characterized by innovations is often described as a complex evolutionary process (Nelson and Winter 1982). Through experimental search characterized by failures and unpredictable breakthroughs, the economy develops over time (Aldrich 1999). Individual market actors make mistakes and invest in the wrong technical solution or the wrong business model for a new technology (Delmar et al. 2011). If the actors themselves who operate in a market are unable to know which technology or business model is optimal, there is reason to question how a public actor in the form of a government agency or a policymaker can perform this task satisfactorily. Government involvement in the form of “picking winners,” that is, attempts to generate growth through government selection of technologies or firms, risks becoming expensive for taxpayers (Lerner 2009). Previous research has shown that venture capital investments tend to be highly spatial and build on social networks (Hochberg et al. 2007). The price mechanism provides aggregate information about customers’ demand, and the firms’ profits and losses. Information and knowledge are thus conveyed and generated among market actors in competitive markets who are nested together through social, economic and technological interdependencies, and this information is hard to extract from its origin and locate in a central policy unit.

#### Empirics go aff – consensus of academic studies

Thierer 8/18 – Adam Thierer is a Senior Research Fellow at the Mercatus Center at George Mason University. He specializes in innovation, entrepreneurialism, Internet, and free-speech issues, with a particular focus on the public policy concerns surrounding emerging technologies.  
Adam Thierer, August 18 2021, “Government Planning and Spending Won’t Replicate Silicon Valley,” Discourse, https://www.discoursemagazine.com/economics/2021/08/18/government-planning-and-spending-wont-replicate-silicon-valley/

Good Intentions Only Get You So Far While these are noble goals, similar reasoning motivated earlier efforts to spawn innovation hubs, research parks and the like. Setting good intentions aside, however, the government’s past track record has been disappointing. “Despite several attempts, Silicon Valley has not been successfully copied elsewhere,” notes Mark Zachary Taylor, author of “[The Politics of Innovation: Why Some Countries Are Better Than Others at Science and Technology](https://oxford.universitypressscholarship.com/view/10.1093/acprof:oso/9780190464127.001.0001/acprof-9780190464127).” Judge Glock, a senior policy adviser with the Cicero Institute, offers a more [blistering assessment](https://www.city-journal.org/manufacturing-needs-fewer-regulations) of such efforts: “Almost every American state has tried to fund the creation of biotech clusters, projects that almost inevitably end with weeds growing through the parking-lot pavement and a trail of corrupt bargains.” Glock’s assessment is backed by economic studies of efforts to incubate various types of high-tech hubs or science parks that stretch back over several decades. Twenty years ago, for instance, economist Scott Wallsten [surveyed](https://www.researchgate.net/publication/313726958_The_Role_of_Government_in_Regional_Technology_Development_The_Effects_of_Public_Venture_Capital_and_Science_Parks) government programs through 1997 aimed at promoting regional science and technology parks. He also [reviewed](https://www.researchgate.net/publication/24049109) the effectiveness of [Small Business Innovation Research (SBIR) program](https://www.sbir.gov/) efforts to boost capital investment in this regard. Wallsten found that “neither SBIR funds nor research parks have significant impacts on regional technology indicators. Indeed, the results seem to suggest that SBIR funds chase success, rather than vice versa, while research parks chase failure (regions experiencing reduced economic growth) and do not generally reverse it.” A decade later, Harvard Business School economist Josh Lerner evaluated dozens of similar targeted development efforts from around the globe in his 2009 book “[Boulevard of Broken Dreams: Why Public Efforts to Boost Entrepreneurship and Venture Capital Have Failed—and What to Do About It](https://press.princeton.edu/books/paperback/9780691154534/boulevard-of-broken-dreams).” He concluded that “for each effective government intervention, there have been dozens, even hundreds, of failures, where substantial public expenditures bore no fruit.” A major culprit for these failures, Lerner argues, is “outright distortions by special interests” and a vocal “subsidy lobby,” including trade associations and other groups and lobbyists who “are benefiting far more from the subsidies than the entrepreneurs the programs are designed to help.” For example, he found that the Small Business Investment Companies (SBICs)—federally backed risk capital programs sponsored by the Small Business Administration that started in the late 1950s—have included “hundreds of funds whose managers were incompetent or crooked.” Another study he highlights showed that “nine out of ten SBICs violated federal regulations in some way.” Another [major survey](https://www.journals.uchicago.edu/doi/10.1086/674023) of efforts to create tech clusters was conducted by Aaron Chatterji, Edward Glaeser and William Kerr in 2014. They collected all the research conducted on the topic and concluded that existing evidence “suggests that the regional foundation for growth-enabling innovation is complex and that we should be cautious of single policy solutions that claim to fit all needs.” Furthermore, “even if clusters of entrepreneurship are good for local growth, it is less clear that cities or states have the ability to generate those clusters.” The more targeted the efforts, the more likely failures become, they concluded. National Efforts Have Not Fared Much Better These studies focused primarily on state and local governments’ attempts to incentivize the formation of clusters or hubs. There have also been many federal efforts to promote the geographic spread of high-tech sectors and jobs since 2000. In 2008, the Brookings Institution reviewed federal initiatives aimed at stimulating regional innovation and entrepreneurialism [and found that](https://www.brookings.edu/research/clusters-and-competitiveness-a-new-federal-role-for-stimulating-regional-economies/) during fiscal year 2006, the government had spent almost $77 billion across 14 different federal agencies and departments on 250 separate programs. The authors noted that with so many different efforts in play, “a lack of coordination is understandable” and that the programs “have evolved in a wildly ad hoc, idiosyncratic, and uncoordinated fashion.” But that did not stop such programs from proliferating. In 2012, the [Obama administration launched](https://www.eda.gov/archives/2016/challenges/jobsaccelerator/index.htm) the multiagency Rural Jobs and Innovation Accelerator Challenge and Advanced Manufacturing Jobs and Innovation Accelerator Challenge. This occurred at roughly the same time President Obama was launching his [Startup America initiative](https://obamawhitehouse.archives.gov/economy/business/startup-america). He also signed the JOBS Act (Jump-start Our Business Startups) in 2012. All these efforts included various measures to support the spread of advanced manufacturing and high-tech startups across the U.S. But none of these efforts have borne much fruit so far.

#### Innovation prevents all other scenarios

Sadedin 17 – PhD in Evolutionary Biology

Suzanne Sadedin, PhD in Evolutionary Biology, Forbes, Will Human Innovation Save Us From Future Extinction?, 9 October 2017, https://www.forbes.com/sites/quora/2017/10/09/will-human-innovation-save-us-from-future-extinction/#1452dd86c659

Will human innovation save us from future extinction? Yes and no. Currently, innovation reduces our chance of extinction in some ways, and increases it in others. But if we innovate cleverly, we could become just about immune to extinction. The species that survive mass extinctions tend to share three characteristics. They're widespread. This means local disasters don't wipe out the entire species, and some small areas, called refugia, tend to be unaffected by global disasters. If you're widespread, it's more likely that you have a population that happens to live in a refugium. They're ecological generalists. They can cope with widely varying physical conditions, and they're not fussy about food. They're r-selected. This means that they breed fast and have short generation times, which allows them to rapidly grow their populations and adapt genetically to new conditions. Innovation gives humans the ability to be widespread ecological generalists. With technology, we can live in more diverse conditions and places than any other species. And while we can't (currently) grow our populations rapidly like an r-selected species, innovation does allow us to adapt quickly at the cultural level. Technology also increases our connections to one another and connectivity is a two-edged sword. Many species consist of a network of small, local populations, each of which is somewhat isolated from the others. We call this a metapopulation. The local populations often go extinct, but they are later re-seeded by others, so the metapopulation as a whole survives. Humans used to be a metapopulation, but thanks to innovation, we're now globally connected. Archaeologists believe that many past civilizations, such as the Easter Islanders, fell because of unsustainable ecological and cultural innovations. The impact of these disasters was limited because these civilizations were small and disconnected from other such civilizations. These days, a useful innovation can spread around the world in weeks. So can a lethal one. With many of the technologies and chemicals we're currently inventing, we can't be certain about their long-term effects; human biology is complex enough that we often can't be absolutely certain something won't kill us in a decade until we've waited a decade to see. We try to be careful and test things before they're released, and the probability that any particular invention could kill us all is tiny, but since we're constantly innovating, it's a real possibility. Pandemics pose the same problem for a well-connected species. There are certain possibilities where species extinction is really hard to avoid; fortunately, they're also very unlikely, but we are definitely not immune from this. The most likely cause of our extinction, in my opinion, is innovation in machine learning/AI. This could destroy the planet, but even if it doesn't, humans will be ultimately redundant to the dominant systems. They might keep us alive in a zoo somewhere, but I doubt it. A happier scenario (to me at least) is transhumanism, where humans become extinct in a sense because we've managed to liberate ourselves from biology. So how could innovation prevent our extinction? We seed the galaxy with independently evolving human populations to create a new metapopulation. These local populations would hopefully be sufficiently isolated that some would survive an innovation or disaster that wipes out the rest. They would, of course, evolve in response to local conditions, perhaps creating several new species. So you could say this is still extinction, but it's as close as we'll come to persistence in our ever-changing universe.

#### Counter-revolutionaries would splinter the resistance

**Wainer and Bienenfeld 19** – Kit Wainer is a member of the United Federation of Teachers and is active in the opposition caucus, the Movement of Rank and File Educators. Mel Bienenfeld is a longtime socialist activist and recently retired president of a higher-education teachers local union.

(Kate Griffiths, 7-21-2019, "Problems with an Electoral Road to Socialism in the United States," New Politics, https://newpol.org/issue\_post/problems-with-an-electoral-road-to-socialism-in-the-united-states/)

Any program of democratizing the existing state would of necessity involve purging its bureaucracies. Such a move would not be perceived as—and in actuality would not be—a mere replacement of one group of officials by another. It would entail a fierce battle on all fronts—in the courts and in the streets. Its success would not be achievable via the actions of the workers’ legislature or executive alone.

Further, the historical conditions we are discussing will involve the need for immediate solutions to critical problems. Workers will expect their government to encroach widely on capitalist property rights in order to produce meaningful reforms. They will need to check the power of the repressive apparatus mobilized against them and begin taking the measures necessary to pull society out of the depths of its crisis. Then they will have to impose their own repressive force against the capitalists and other counter-revolutionaries fighting to prevent the success of the revolution and overturn its gains.

It is likely that institutions like workers councils will arise in a period of intense struggle. Among the roles they will play will be to defend workers’ social movements against the force of the state and to defend democratic rights. Blanc suggests, reasonably, that workers may need to defend an elected government against a coup. Yet, this alone would be a revolutionary step and likely provoke violent reaction. A parliamentary regime presiding over the current constitutional order would not be in a position to continue the revolution. For better or worse, only if and when workers councils are able to cohere a force with both the physical power and firm intent to break through legal and constitutional limits in order to complete the revolution can the transition to socialism be carried out.

#### Only capitalism induces sustainability – degrowth would increase emissions and undermine transition to clean energy

Fickling 20 – Bloomberg Opinion columnist. Citing the International Energy Agency’s most recent World Energy Outlook.

David Fickling, “Capitalism Caused Climate Change; It Must Also Be the Solution,” *Bloomberg Opinion*, 14 October 2020, https://www.bloomberg.com/opinion/articles/2020-10-14/capitalism-caused-climate-change-it-must-also-be-the-solution.

Perhaps instead of trying to make the climate subservient to the needs of expanding gross domestic product, we need to cut our economic coat according to our atmospheric cloth?

The International Energy Agency’s latest World Energy Outlook provides one reason why that’s unlikely to work.

The outlook, released Tuesday, is structured around scenarios reflecting different policy settings and how they’ll affect energy consumption and emissions over the coming decades. This year, two are new: one illustrating the path to net-zero emissions by 2050, and one showing how a delayed recovery from the pandemic might alter the picture.

Such a recession would indeed reduce emissions in the near term. Until 2023, the Delayed Recovery Scenario sends less carbon into the atmosphere than the Sustainable Development Scenario, which is meant to model the path to keeping global warming well below 2 degrees Celsius.

After that, though, things fall apart. Thanks to ongoing economic weakness, governments and businesses lose the capacity to carry out the spending needed to remake the world’s energy system. Investment in fossil fuels falls by 10% relative to expectations under current policies, but spending on renewables and nuclear drops by 5% as well, so that $2.2 trillion less is spent by 2030.

Rather than investing to replace our power plants and appliances with lower-carbon alternatives, we eke out their polluting lives a little bit longer. By 2030, annual emissions are about 29% higher than they would be under Sustainable Development.

This desktop model of how the world could develop reflects a profound truth. The atmosphere can accommodate about 500 billion metric tons more carbon dioxide to give an even chance of keeping warming below 1.5 degrees — but the world’s current industrial base is currently pumping out roughly 33 billion tons a year, and will continue to do so unless we can replace it.

Retrofitting the world’s energy systems is going to require vast sums of money. Renewable power alone will need an average $569 billion of investment every year over the coming decade under the IEA’s Sustainable Development Scenario. That’s almost twice the rate seen over the past five years, and not far behind what the entire oil and gas sector would spend under the same settings. If anything, the world needs a target that’s more ambitious still.

If we can get up to speed, that volume of spending will create its own momentum. One justified complaint of anti-capitalist climate activists is that our political systems frequently put their thumbs on the scale to favor powerful incumbent businesses, which at present are mostly the polluting ones. But a system where investment dollars are flowing away from fossil fuels and toward decarbonization is one where power, too, is shifting away from the carbon economy.

Even under the IEA’s less ambitious Stated Policies Scenario, the $15.14 trillion that gets spent globally on fossil fuel generation and production by 2040 is smaller than the $15.97 trillion spent on renewables and nuclear — and doesn’t include the amounts that go to energy efficiency and grid networks. Under the Sustainable Development Scenario, which has historically often been a better guide to the path of the energy transition, low-carbon power ends up with $2.70 of spending for every $1 going to fossil fuel extraction and generation. That’s a world in which renewables will increasingly set the rules of the game, encouraging governments to remove the remaining subsidies that support oil, gas and coal.

Since the industrial revolution, the fossil-fueled engine of capitalist growth has conspired to put the world in its current climate crisis. Harnessing that power to drive the carbon transition is now our best hope of turning that disaster around.

#### Heg solves war.

Brands & Edel 19, \*PhD, Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins School of Advanced International Studies. \*\*PhD, Senior Fellow and Visiting Scholar at the United States Studies Centre at the University of Sydney. (Hal and Charles, *The Lessons of Tragedy: Statecraft and World Order*, Ch. 5: The Contemporary Amnesia, Yale University Press)

As William Wohlforth has noted, American primacy and activism acted as a powerful deterrent to great-power conflict by creating enormous disincentives for Russia, China, or other actors to incur the “focused enmity” of the United States.11 The persistence and even extension of the U.S. security blanket smothered potential instability in unsettled regions such as Eastern Europe, while removing any possibility of German or Japanese revanchism—a prospect much feared in the early 1990s—by keeping those countries tightly lashed to Washington. American intervention helped extinguish bloody conflicts in the Balkans before they could spread to neighboring countries; U.S. diplomatic and military pressure kept aggressive tyrannies such as Iraq, Iran, and North Korea bottled up and helped slow the spread of nuclear weapons. U.S. support helped democratic forces triumph in countries from Haiti to Poland, as the number of democracies rose from 76 in 1990 to 120 in 2000; America crucially assisted the advance of globalization and the broad prosperity that came with it by promoting pro-market policies and providing the necessary climate of reassurance and stability.12

#### Financialization theory is wrong

Konings, 18

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Critics of neoliberal capitalism rarely recognize the productive power of speculation. If there is one theme that unites the various critiques of contemporary finance, it is the emphasis on its speculative character. Financial growth is said to be driven not by the logic of efficient markets, but rather by irrational sentiment, “animal spirits” that do not respect fundamental values. Emphasizing the role of volatility in contemporary capitalism (evident at the time of writing, as the stock market is experiencing a downturn) is important as an antidote to notions of market efficiency and equilibrium. But it is a mistake to think that it provides a sufficient basis for effective critique. Predictions regarding the limits or collapse of neoliberal finance have simply not enjoyed a good track record. Over and over, the contemporary financial system has proven capable of sustaining higher levels of speculative activity than anticipated. This has certainly been true of the past decade. Capital and Time: For a New Critique of Neoliberal Reason is my attempt to make sense of this—that is, to understand what might be wrong or missing in the existing heterodox critique of speculation, and to advance a more accurate understanding of the role of uncertainty, risk, and speculation in contemporary capitalism. At the heart of the critique of speculation we find a distinction between real and fictitious forms of value. Although “essentialist” (or “foundationalist”) modes of explanation have been under fire across the social sciences for several decades now, when it comes to the critique of finance they have had considerable staying-power: without a notion of real value, it often seems, we lose any objective standard against which to assess the speculative gyrations of capitalist markets. Capital and Time asks what kind of critical theory we might develop if we bracket the anxious attachment to a notion of fundamental value. To that end, it turns to the work of economist Hyman Minsky. Although Minsky has been popularized precisely as a critic of speculation, he in fact insisted that almost all value judgments and investments were to some degree speculative—their success or failure would be determined in an unknown future. For him, the key economic question is how order emerges in a world that offers no guarantees, how more or less stable standards and norms arise amidst uncertainty. Of course, the “endogenous” origin of financial standards is a well-rehearsed theme in heterodox economics—indeed, it is a staple of the “post-Keynesian” literature that claims Minsky’s legacy. But such perspectives have never been able to break with the idea that financial stability is at its core dependent on external interventions that suppress speculative impulses. For Minsky, however, this is to miss the point about endogeneity. To his mind, there was no clear dividing line between financial practices and their governance: central banks and other public authorities are no more able to see into the future and to transcend uncertainty than private investors are. Minsky was therefore highly skeptical about official claims of discretionary precision management: financial governance is always embroiled in the very risk logic that it is charged with managing. That also means that financial policy can appear quite ordinary, even banal: at the heart of capitalist financial management is a logic of backstopping and bailout that responds to the possibility that the failure of an institution may take down wider financial structures. The stability of the post-New Deal financial system is often attributed to the Glass-Steagall separation of the stock market and commercial banking. But Minsky tended to view Glass-Steagall as one of several measures to direct bank credit away from the stock market towards other, no less speculative ends, notably consumer and mortgage financing. To his mind, the stability of the post-war period derived rather from the creation of an extensive financial safety net (which included, for instance, deposit insurance, which removed the rationale behind bank runs) that served to socialize risk. This institutional arrangement turned out to have a significant drawback: a pattern of chronic inflation emerged that, by the late 1970s, was widely perceived as a major problem. Minsky’s lack of faith in the possibility of cleanly staged external interventions led him to feel that that there was no real way out of this predicament. Monetarist doctrines, ascendant during the 1970s under the influence of Milton Friedman, relied on exactly the belief in an arbitrarily defined monetary standard that Minsky rejected as naïve. Muddling through, it seemed, was the price of avoiding another financial crash and depression. The Volcker shock of 1979 changed this dynamic in a way that Minsky had not foreseen but that is comprehensible when seen through the lens he provided us with. Paul Volcker looked to monetarism not as a means to enforce an external limit or standard on the financial system, but as a politically expedient way to break with accommodating policies and to proactively engage the endogenous dynamics of finance. The consequences of the Volcker shock were predictable (which is exactly why the Federal Reserve had been reluctant to pursue similar policies in previous years): inflation gave way to instability and crisis. Inflation was conquered as jobs were lost and wages stagnated. And, far from money being returned to its neutral exchange function, opportunities for speculation multiplied. The American state was never going to sit idly by as the financial system returned to dynamics of boom and bust: when instability took the form of systemic threats, authorities would bail out the institutions that had overextended themselves. Of course, Volcker would not have been able to predict the specific features of the too-big-to-fail regime as it emerged during the 1980s and evolved subsequently; but the very point of the neoliberal turn in financial management that he had overseen was to create a context where risk could be socialized in ways that were more selective and therefore did not entail generalized inflation. The inflation of asset values that has been such a marked feature of the past four decades has always been premised centrally on the willingness of authorities to view the “moral hazard” of the too-big-to-fail logic as a policy instrument—even if they may have decried it officially as a regrettable corruption of market principles. Spectacular bailouts, mundane policies to protect the key nodes of the payment systems, the “Greenspan put”, the different iterations of quantitative easing—these are all variations on that basic too-important-to-fail logic. Existing critical perspectives tend to view crisis and the need for bank bailouts as manifesting the essential incoherence of neoliberal finance, its lack of solid foundations and the irrationality of speculation. Capital and Time breaks with such moralistic assessments. The way deepening inequality and the speculative growth of asset values continue to feed off each other is troubling for any number of reasons, but there is nothing inherently “unsustainable” about it—the process does not have a natural or objective limit. At this point in time, the critique of speculation does little more than lend credibility to official discourses that present crises as preventable and bailouts as one-off, never-to-be-repeated interventions. In that way, it prevents us from critically relating to a neoliberal reality that has been shaped to its core by the speculative exploitation of risk and uncertainty, and in which regressive risk socialization serves as the everyday logic of financial governance.

#### Carbon pricing drives a shift to renewables – increases the cost of carbon relative to renewable innovation

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There is a range of market failures that lead to underinvestment by the private sector in R&D, and this requires government action to encourage a level of innovation that is socially optimal.30 One of the market failures arises when the social value of knowledge from innovation—the positive externalities—is higher than its private returns.31 This arises from the inability of the producers of knowledge to capture all the value, leading to an underinvestment in the R&D process.32 One reason for this is that information, once produced, can be consumed by others, and the value of knowledge and innovation to society increases the more it is used by others.33 As new innovation in technology is incorporated into different production processes, the process of learning-byusing and learning-by-doing can generate dynamic feedback as new knowledge and ways of operating are developed.34 Moreover, the social value of increasing the supply of innovation is particularly high for green technologies, which also address environmental harms, emphasizing the need for government action to address the social costs of such underinvestment.35 Another market failure arises from information uncertainties that lead to suboptimal levels of innovation.36 For instance, uncertainty due to a lack of information and financial expertise to assess the commercial viability of new green technologies leads to underfunding and a lack of commercialization.37 Policy uncertainty with regard to climate change action also increases the risk of investing in green technology.38 For example, in a 2011 survey of businesses, most respondents cited ambiguity in government support as the key risk associated with low-carbon investments.39 As a result, renewable energy tax credits that need to be annually approved increase the risk of investing in renewable energy projects.40 Government action to stimulate innovation in green technologies is also required to address the path dependency created by technology lock-in—the dominance of a market by an inferior technology.41 Technological lock-in leads investors to continue investing in improving the efficiency of the incumbent technology, particularly where returns remain large and information on the new technology and its operation are limited.42 The risk of technology lock-in is especially large in the energy market where the costs of shifting away from coal fired power stations with low operating costs creates incentives for owners to update or incrementally adjust their operations rather than moving to zero-carbon alternatives such as renewable energy.43 This underinvestment in green energy is seen in the private sector’s limited spending on energy R&D, which in 2007 was 0.23% of revenues, compared to the industry average of 2.6%. B. Technology-Push and Demand-Pull Innovation Policies - Governments have a range of technology-push and demand-pull polices to address these market failures which leads to underinvestment in clean technology R&D by the private sector.45 Technology-push measures drive the supply of innovation and include policies to support R&D and regulations, such as those that require utilities to use the best available technology.46 Demand pull innovation arises in response to market demand, the most obvious one being a carbon price, which by reducing consumer demand for the relatively more expensive carbon intensive goods creates an incentive for firms to produce less carbon intensive ones.47 This is often referred to as induced innovation where changing the relative price of a factor of production creates an incentive to innovate in order to minimize the use of the relatively more expensive factor.48 This is a more specific example of the broader economic premise that pricing carbon is the optimal way of encouraging economically efficient abatement to deal with the global commons challenge of climate warming.49

#### Aff internal link solves democracy – inclusive growth solves trends towards populism and authoritarianism

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Saleamlak Fentaw Getahun, “Review of Inclusive Growth and other Alternatives to Confront Authoritarian Populism,” *Problems of World Agriculture*, vol. 17, no. 4, 2017, pp. 78-79, https://ageconsearch.umn.edu/record/266504/?ln=en.

Alternatively, inclusive growth that would successfully shares the benefits to the rural people via inclusive political and economic institutions could be able to transform the rural poor. Adopting and supporting this option saves globalization from a looming collapse and ultimately culminates the world to a new level of civilization. Therefore, I would argue intuitively that the mainstream political and economic institutions are failing to include the rural world and to benefit from the fruit of capitalism and globalization. This argument answers the question why the rural world is adopting authoritarian populism and how this ideology is getting ground as an alternative political system. In this paper, I would explore the potential of strengthening inclusive institutions, both political and economic to subside the authoritarian populism. Moreover, the interaction between rural areas and regressive national politics will be discussed intrinsically, and other alternatives like emanicipatory rural politics will also be discussed. This paper seeks to use the term 'authoritarian populism' in a politically neutral way focusing on its features, its background and alternative pathways. The aim of this paper is to review the main reasons of the rise of authoritarian populism in the rural world and to forward some alternative paths needed; like inclusive growth. To achieve this, I applied qualitative analysis as a method and recently published papers in the area (most suitable to my aim) are included as data sources.

#### Extractive economies have a clear path to sustainability even under pessimistic assumptions—their alt induces collapse while there’s still time to act

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(Andrei V., “Extraction path and sustainability,” *Resources Policy* 76, Science Direct)

As is known, the prescriptions of IAM, the main tool of climate economy modeling, highly depend on uncertain key parameters such as discount rate or damage functions. As Stern and Stiglitz (2021) put it, ‘‘In the presence of these extreme uncertainties .. .a full analysis is impossible’’. IPCC conclusions induce an additional approach for rough estimates of mitigating policies. The conclusions imply that the perceived quality of life34 for majority of Earth’s population, including the least advantageous, will decline with further growth of global temperature. Since the approach to justice evaluation depends on context (Konow, 2003), the climate context calls for the maximin to mitigate the worst damages while eliminating the most controversial parameter – discount rate – and, again, bringing closer the problem of climate change to the analysis of the current paper.

For a decreasing welfare indicator, the maximin, as illustrated in Sections 4.1 and 5.3, requires to start with the most aggressive ‘‘politically feasible’’ actions, which is consistent with climate mitigating investments that are less than 2% GDP annually (Stern and Stiglitz, 2021). This claim does not require full optimization since it follows from a simple logical exercise similar to the one in Solow (1974b).

Under uncertainties, the IAM prescriptions and the paths in the form of (4) can be used as first order approximations with further corrections after updates in knowledge (Section 5.2) possibly using feedback control: if emissions exceed the limits advised by IPCC or the extraction of a mineral exceeds an estimate given by (4), the correspondent taxes/subsidies should be incrementally increased.

7. Conclusions

Sustainability requires coordination of market activities with the ability of economy to satisfy the current and future consumption needs using limited stocks of nonrenewables. This ability depends on the consistency of intertemporal distribution of a stock with the possibility to gradually replace the resource with other factors. This paper assumes the weakest form of this possibility (unitary long-run elasticity of resource–capital substitution) that still gives a chance for sustainability. More pessimistic assumptions can lead to collapse-inducing policies such as complete decapitalization in finite time while sustainability may be possible.

The paper provides a closed-form expression for a family of extraction paths that guarantee long-run sustainability of an imperfect economy. A path from this family leads to a monotonic growth of output with a decreasing rate of growth if a sustainability condition holds. Otherwise, the path leads either to a bounded decline or Ushaped path of output depending on a parameter. That is, the offered approach allows to quantify degrowth scenarios.

The paper does not assume that a planner should commit to the offered path. It is known that inevitable variations in technologies and other uncertain parameters such as stock estimates and consumer preferences lead to dynamic inconsistency. A sensitivity analysis provides practical recommendations on the path corrections depending on these changes. For example, an increase in capital–resource substitutability may be accompanied by a slower decrease in the short run extraction.

Another example shows that stock underestimation and dynamic reestimation of extraction path depending on stock updates works as an investment rather than just insurance against future collapse. Theoretical results are illustrated with numerical examples for a hypothetical upper middle-income oil extracting economy. In particular, these estimates show that the long-run sustainability requires a fast short-run decrease of extraction consistently with the IPCC goals on cutting GHG emissions. That is, the offered approach may work as an incentive-compatibility mechanism for resource-extracting countries: domestic production sustainability requires the same actions as the global goal of mitigating climate change.

#### Tech solves ag sustainability, but market mechanisms are key to accelerate development

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Designing market incentives. The appropriateness of measures and incentives and the factors that are critical to the success of transformational innovations are often context and technology specific. The barriers to innovation and diffusion also differ. In competitive markets (such as food and energy), companies often underspend on research and development relative to what would be the optimal expenditure level from a society’s perspective, since they typically cover all the costs but are not the sole beneficiaries of the knowledge generated along the process. Historically, governments have sought to correct this market failure by rewarding innovative efforts, including ‘market pull’ measures, like granting innovators (temporary) monopoly rents through patent protection, complemented by other inducements and subsidies for underfunded priorities (for example, orphan diseases); and ‘market push’ incentives, for example, tax credits, public procurement, or pricing of externalities. Making these incentives accessible to new entrants is critical, as it is unclear whether transformative innovation will emerge from established industry players44. Innovation incubators and accelerators often play a key role in bringing novel solutions to market45. This has been the case with many technologies on our list (Fig. 1) across all technology groups (drones, algae for feed, plant-based meat substitutes, nanoenhancers, personalized food). Incentives that drive innovation also differ from those that encourage diffusion.