

GLOBAL RISKS 2035 UPDATE

Decline or New Renaissance?

Mathew J. Burrows

Foreword by Amb. Thomas R. Pickering

Global Risks 2035 Update: Decline or New Renaissance?



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Edgar Karl Alfons Ende (23 February 1901—27 December 1965) was a German surrealist painter. In the 1930s Ende's Surrealist paintings began to attract considerable critical attention, but were then condemned as degenerate by the Nazi government. Beginning in 1936 the Nazis forbade him to continue to paint or exhibit his work. In 1940 he was conscripted into the Luftwaffe as an operator of anti-aircraft artillery. The majority of his paintings were destroyed by a bomb raid on Munich in 1944, making his surviving pre-war work extremely rare.

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FOREWORD

Risk reports are by their nature gloomy. They must contend with new world dynamics highlighted by a mercurial and unpredictable US president. For the first time, the predictor's puzzle is mostly fastened on the United States. This is a new benchmark and a much less reliable one than the past where the United States had anchored and helped to push forward much of the globe.

Two major phenomena are related preoccupations. First is the rise of China in a planet of growing multipolarity, increasingly dominated by a bipolar China-US contention. Some see this as a struggle for world hegemony and others, more inspired by hope perhaps, see it as a development to be treated diplomatically to escape the rising-falling states, Thucydides trap. Second is the much-anticipated disappearance or morphing of the US-installed "liberal progressive" order. The replacement contender seems to be growing autocratic dictatorship, fueled and funneled by increasingly nationalist populism.

Taking these warnings lightly may mean a terminal decline for the United States, if not the world. In this volume, Mathew Burrows—well-known author of several of the National Intelligence Council's Global Trends editions—calls our attention to the biggest threats that can no longer be ducked by decision makers.

They include increased state-on-state conflict, as highlighted in the almost daily thrust-and-parry between the United States and China. Once sundered, cooperation is hard to repair. As this volume notes, the narratives on both sides are already forming.

For Americans, it revolves around "China owes us." The Chinese would never have risen without the United States ushering them into the World Trade Organization and opening the global trading system to China. This ignores the benefits the United States derives from China's being a global economic driver, most notably in preventing the West from sliding into a deeper recession after the financial crisis in 2008.

For Chinese, many see the trade war as a return to nineteenth-century power politics when China was forced to agree to import opium and to accept "unequal" treaties. The tensions feed a deeply rooted Chinese preoccupation that the United States was always going to try and stop China. This is an ideal setup for not understanding the other's point of view and avoiding the construction of a compromise. Is there a way to replace the present bipolar conflict with a new one emphasizing cooperation over conflict, despite the decreasing Sino-US economic interdependence?

In the United States, a self-centered presidency with a goal of promoting self not national interest is increasingly challenged by a debt burden and declining world leadership. The studied lack of attention to the debt has begun to raise anxiety about another US-driven economic decline in the road ahead.

Slightly brighter, there are threats that can be turned into opportunities. Migration is a potential plus for the West. The latest demographic news shows the United States declining in population in the 2030s if immigrants are no longer welcomed. The trick will be how fast they can be integrated, contributing to the economy. Otherwise, as we have seen in Europe and the United States, the issue of increased migration can be politically destabilizing. What will be interesting to see is whether countries such as China and even Japan—already in need of more skilled workers—can attract and integrate them in enough numbers to stave off the effects of rapid aging.

Climate change is no longer a distant threat. The poor and weak are destined to bear the brunt, but rich countries are seeing large-scale damages at a much earlier stage than predicted ten years ago. It is only a matter of time before we see more direct damage through sea level rise, floods and severe weather events, and second- and third-order effects, such as influxes of environmental migrants. Climate change also has the potential to divide us more than pull us together in the world. How can we tell others in the developing world to forego cheap coal if we do not help ourselves and them on renewables? How can we in rich countries tell them they cannot have an improved, even Western, lifestyle because the planet would suffer too much? There are equitable solutions, but there needs to be early planning and more investment in renewables, especially battery storage technology.

To conclude, Dr. Burrows pleads for policymakers to use more strategic foresight to turn these challenges into opportunities. Crisis management alone will not be successful. We need to get ahead of the curve in making innovative changes. Policy makers are already grasping that the threats facing us are more complex and putting off action only further raises the costs of countering them. The challenge is whether we can mobilize the will and the funding, the brains and the brawn, to do that.

The title is therefore aptly, but carefully, chosen; decline is not inevitable. Crises have often been the force that leads to rebirth. We should see this volume less as an effort to horrify than a clarion call for a positive and different way of growing and governing.

A handwritten signature in black ink, reading "Thomas R. Pickering". The signature is fluid and cursive, with the first name "Thomas" and last name "Pickering" clearly legible.

Amb. Thomas R. Pickering

Former Under Secretary of State for Political Affairs;

Former United States Ambassador;

Board Director, Atlantic Council

EXECUTIVE SUMMARY

What has Changed? What is the Same?

In the two years since the publication of *Global Risks 2035*,¹ the post-Cold War order has continued to unravel without a “new normal” emerging. If anything, with de-globalization underway, conflict among the great powers looms even larger than when *Global Risks 2035* was written in mid-2016. We must recognize that the old historical rhythm that laid the foundations of the Western liberal order has come to an end. The world now faces momentous challenges with climate change, the return of state-on-state conflict and an end to social cohesion with increasing levels of inequality. Without a political, intellectual and, some say, spiritual renaissance that addresses and deals with the big existential tests facing humanity we will not be able to move together into the future. With so much of the analysis of *Global Risks 2035* still on target, this update focuses on key changes since 2016 and the alternative worlds that appear to be emerging from the fraying of the old normal.

Summary of 2016's *Global Risks 2035*

State-on-state conflict was seen as a bigger threat than terrorism. In the best case, the world would be headed toward multipolarity with limited multilateralism. However, the growing fragmentation of the global order could easily slide into open conflict. In that worst case, multipolarity would evolve into another Cold War bipolarity—with China, Russia, and their partners pitted against the United States, Europe, Japan, and other allies. In that scenario, conflict would be almost inevitable.

The fracturing of the post-Cold War global system would be accompanied by internal fraying caused by technological advances. No one was spared. Robotics, artificial intelligence (AI), 3D printing, and automation were already upending both skilled and unskilled occupations in the developed world. As the cost of robots came down and automation and 3D printing spread, still-struggling emerging markets could no longer rely on lower labor costs, as China did to fuel its rise. This is a far cry from the earlier notion that globalization and technological change would “lift all boats.”

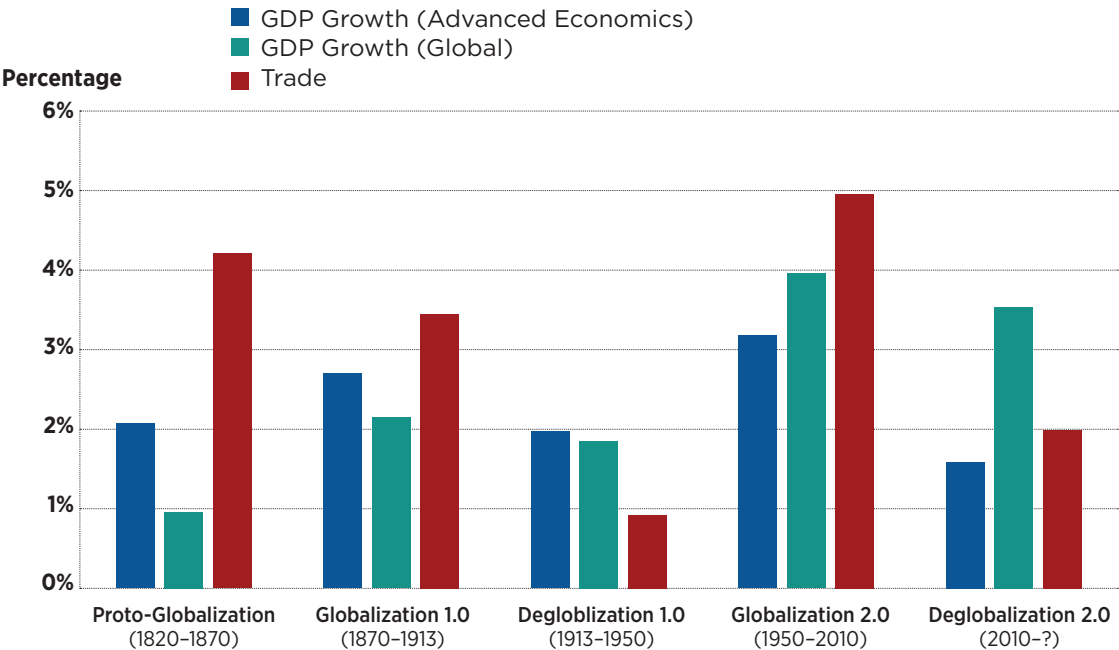
Under any scenario, many of the poorest of the developing countries will face stiffer, potentially existential, challenges linked to climate change, poor governance, higher incidences of civil conflict, and overpopulation. Climate change will impact everyone in the coming decades, but the poorest areas—sub-Saharan Africa, the Middle East, and South Asia—will be hit hardest by increasing temperatures and rising sea levels.

Tectonic Shifts

The United States (US) remains one of the biggest puzzles. The founder of the old order—centered on liberal market values—has become blatantly self-interested and nationalistic under President Donald Trump. At the same time, the United States has become more divided, making it difficult to make any prognostications about future trends post-Trump. Although it would be a fool’s errand to try to predict whether the US will be Blue (led by the Democratic Party) or Red (run by Republican Party) following the next presidential election in 2020 or beyond, numerous tectonic shifts are shaking the US position in the world and on the home front. Returning to the halcyon days of the 1990s when the United States was at the height of its powers across the board will not be an option for any president.

However much Americans may feel regret or nostalgia, the unipolar moment is definitively over and a multipolar system has become increasingly entrenched. The US has several options for how it can operate in this new situation. It can deny the inevitable, thereby worsening its ability over time to protect its interests, or it can jockey for advantage as most powers have had to do throughout history, building coalitions to protect its interests and seek advantage. While the United States will remain among the most powerful actors with significant military and economic leverage, acting as if it can still make *all* the rules and enforcing them on others is not an option.

The Cycle of Globalization and Deglobalization



SOURCE: Bob Swarup, Macro Matters, Camdor Global Advisors, July 2015.

The US Economy: Growing Debt

For the United States, a key weakness going forward is the fiscal outlook. The 2017 tax bill reductions may have spurred a rebound, but most economists believe it will be short lived. Despite the Trump administration's confidence, the US economy has been settling into a lower band of average annual growth—closer to 2.0-2.2 percent—rather than the more than 3 percent that the president is counting on. Meanwhile, the annual deficit is rising at record speed. Under even the most optimistic forecast, federal debt rises to a dangerous level of over 118 percent of GDP in 2038. Alternative scenarios—which some experts believe may be more realistic—show even larger annual deficits and overall debt up to as much as 165 percent of GDP by 2038.

Implementing the structural reforms needed to bring down deficits will not be easy. The US is already overspending on healthcare even before the vast majority of the baby boomers have retired. As shown by the polemics over former President Barack Obama's Affordable Care Act, it would be politically difficult for either party to radically reform the healthcare sector. In the medium term, the US appears to be stuck with its more than 18 percent of GDP going to healthcare—almost twice what other advanced economies pay for it, some achieving better results.

Wars are also expensive. Except for the first Gulf War—which was largely paid for through foreign grants—the United States has financed all its wars since the Korean War by borrowing. With the Iraq and Afghanistan Wars costing \$7 trillion and still counting, it is hard to imagine any wars of “choice” being an option without setting the US on a path of fiscal ruin. Further borrowing on the scale required for a major war would raise interest rates and squeeze available money for other uses. To lower the level of borrowing, the US would probably have to go back to some form of taxation or reduced expenditures elsewhere in the federal budget, cutting Social Security and healthcare. Even a war of necessity might come under added scrutiny, although Americans would undoubtedly be prepared to pay anything to protect themselves.

US Global Influence

That said, the United States has a lot of maneuvering room if it plays a more restrained hand. Although one recent Atlantic Council study² showed how the US has been losing influence, particularly in the developing world, Russia and China may be overplaying their hands. Both have severe challenges facing them domestically. China's neighbors worry about a dominant regional power, but they do not want to be forced to choose between Washington and Beijing. It is unclear—despite huge efforts and investments—whether China can make the leap to become an innovative economy in the short time frame (Made in China 2030) that Beijing has in mind. Owing to the slowdown in economic growth, fewer good-paying jobs are available for China's newly minted middle-class graduates. While AI affords the regime better ways to track dissent, revolutions have occurred

before, with the odds stacked against the perpetrators. Although a revolt seems unlikely today, a sustained economic slowdown coupled with growing inequality could change that outlook.

Russia must worry about the decline of key sectors, including its energy sector. Unless it can overcome sanctions and lure more investment, especially from the West, it will be impossible to boost its long-term economic performance. Recent Pew Research polling³ shows that majorities or pluralities of publics in nearly all the 25 countries surveyed say that the future would be better if the United States was the world's leading power than if China were. This is despite the fact those publics see the US as having only a slender economic lead over China. The West still has an advantage in terms of values. Anticorruption and rule of law are particularly popular, but the US and rest of the West must be careful about lecturing others too much. Owing to increasing nationalism across the world, no leaders want to be told how to run their country's government or economy. For the moment, engendering growth and providing economic opportunities are more important for the emerging global middle class than establishing a full-bodied Jeffersonian democracy.

Transitions to a new order are tricky for all powers. In the twentieth century, Germany made a bid to become a hegemonic power, but the world struggle that ensued irreparably wounded Britain while laying the groundwork for the US to become the global superpower. Few, if any, observers predicted such an outcome at the start of the twentieth century. An absolute US decline is not inevitable, but there is no guarantee against it. In the same way that both Germany and Britain suffered, a conflict with today's rising power—China—would increase the risks of decline for the United States. Finding a way for both the United States and China to avoid a Thucydides trap is likely to be beneficial to US interests even if doing so means conceding increased status for China in the global order.⁴ The mindset of US foreign policy elites is some ways away from accommodating itself to a world in which both the US and China rule—a world in which compromises must be made. Almost seventy years after world power fell suddenly on US shoulders, a new generation will have to go back to the drawing board to figure out a new world order in which US and Chinese interests can both be assured while not laying the groundwork for an eventual conflict.

Technology: A Game Changer for Good and Bad

The Sino-US technology rivalry is increasingly implicated in the broader spurt toward a multipolar world. Even five years ago, the United States' innovation lead appeared assured, although the Atlantic Council published warnings⁵ about the need to bolster the investments in basic research, including the desirability of boosting US human capital investments. Only

a few years later, many experts are talking about China leading in certain areas—such as AI-based facial recognition technologies—and having an advantage because of its big stores of data, necessary to perfecting AI algorithms.

It is too soon to say which country will win. In the view of many Chinese, the United States has such built-in advantages that it will take China decades more before it can match the US, let alone surpass it. For their part, some US experts believe that China has a distinct advantage in that its civilian research and development (R&D) is more closely aligned with its military sector, allowing it to more rapidly exploit the dual-use possibilities of AI, robotics, and other emerging technologies.

How the competition develops poses broader questions for global development in the coming decades. If the technology sectors are increasingly protected in the United States, China, and other countries, the result will be fragmentation, diminishing globalization. Experts already fear that separate 5G standards might be developed for the US, European Union (EU), and China, forcing the rest of the world to choose among them. China has its Great Firewall for the internet. The EU is setting privacy standards that are not being adopted in the US. A balkanization of the internet—which many experts, including those at the Atlantic Council, have feared could happen—appears increasingly likely. Such a breakup mirrors the regionalization that has been occurring in trade patterns such that more regionalized trading spheres are becoming divided from each other by conflicting technology standards. Should the globalized science and technology (S&T) expert community become more nationalized, the risk of returning to a type of Cold War rivalry and turning technology into a vehicle for national economic and military advantage would increase—a significant departure from the original internet founders' dream of bringing together disparate peoples.

Whether countries will move away from broad cooperation toward increasing competition is an open question. Multinational businesses—Western and Chinese—still want to operate in global markets. The S&T research communities remain highly international with the best Chinese scientists being trained in the United States and the most important patents being developed by international teams.

Changing Immigration: Benefits and Dangers

Aging and migration are creating a new dynamic. The assumption has often been that more development in the places that migrants are coming from will lessen their desire to emigrate. Apparently, though, it is the other way around. Economic development leads to *more* migration until the country sending migrants develops to a point that there are high-skilled jobs at home. The net flow of migrants from Mexico to the US has reversed in recent years, for example, because there are now many more economic opportunities in Mexico than before. Migrants want better educational opportunities and jobs that can improve their skill levels. This new

trend toward increased mobility and migration mirrors the growth in the global middle class.

For their part, aging countries are in need of labor, particularly highly skilled workers. Japan, Germany, and China all have growing economies and quickly aging nativist populations. Japanese Prime Minister Shinzō Abe is exploring a pathway for immigrants to become Japanese citizens—a startling departure from Japan’s traditional aversion. Japan is already letting in more guest workers. Germany—which will probably benefit demographically from the recent increased migration in the medium-to-long-term future—has been exploring how to attract more highly skilled workers. Like their Japanese counterparts, German companies have relocated operations elsewhere to draw in new skilled workers. China is also trying to re-attract its diaspora and other non-Chinese to come and work in China. Skills gaps have become a permanent challenge in Shanghai and other fast-growing urban areas.

The political debates over immigration have largely obscured this phenomenon, casting the spotlight on the negative features of immigration, particularly the deepening social divides fueling populism. Establishment political parties in many Western countries have taken a hit because their base supporters are opposed to immigration. Closing down all immigration risks economic decline for Western countries, whose aging will accelerate. Over time, though, competition for highly skilled immigrants could increase as aging accelerates and countries try to deal with the widening skills gaps. Even the Trump administration, which has gotten political advantage from its anti-immigration rhetoric, wants more highly skilled workers coming to the United States (although the general anti-immigrant rhetoric is making that harder to bring about). As of yet, few governments are persuading voters that immigration of highly skilled workers is beneficial and needed.

Refugees are a separate category of migrants that are afforded more rights and protections in international law. Even before the Syrian civil war, a higher proportion of civilians than in decades past was fleeing conflicts. Nevertheless, many richer countries have not had the capacity or willingness to take Syrian refugees despite their many promises. Trump wants to put up a wall to discourage low-skilled immigrants and refugees. European countries want to establish refugee centers in North Africa, restraining illegal entry into the EU. All of this amounts to good and bad news for those wishing to emigrate. The better educated have the best chance. Although deserving, refugees will find it harder to make their case for entry into Western countries.

Climate Change—A Sleeper Awakening?

Experts have been warning about the impacts of climate change for years—if not decades. The temptation—especially when the impacts are less widespread—is to take small steps toward managing the risks. Research is now showing that the world is on the verge of a tipping point, after which

no practicable amount of effort can reduce the risk of a slide to a plus-2-degree C world in which life would become unbearable for a great many.

Part of the problem has been that those living in the most deprived parts of the world will experience the most suffering. Restricting carbon emissions could disadvantage emerging markets, such as India, that are beginning their climb to economic modernization, including consuming more energy. The temptation for India and other developing states will be to use cheap coal to power their rise, dooming themselves and others. From an equity standpoint, the US cannot forbid the use of coal by others without undermining the moral position of the West, whose rapid development over the past couple centuries was partly linked to the use of coal. Ramping up assistance by the advanced economies could solve this problem by enabling the early adoption by developing countries of renewable energy sources and natural gas.

Such a climate change Marshall Plan seems politically impossible—at least for the moment—but such a plan is conceivable if the effects of climate change become more evident. A greater number of extreme weather events than were predicted at this point in the climate change cycle are already occurring. A crescendo of more massive hurricanes and cyclones, exceedingly hot summers or cold winters, devastated harvests, and other manifestations of severe climate change effects might convince policy makers and publics in a way that scientists have not been able to do thus far. If that were the case, a massive collective program to solve an upcoming existential threat—and it has to be collective if it will be effective—would have a spillover effect, ushering in a new period of global cooperation. Historically, spurts in global cooperation have occurred after massive failures of the global system—such as after the Napoleonic Wars or the Second World War. However, the world cannot wait until the impacts of climate change are full blown. By that time, the world most likely would descend into a “sauve qui peut”—every country for itself—posture. With some foresight, though, the worst outcome can be forestalled and advantages can be gained in other areas by building global cooperation.

Scenarios: The Bad, the Good, and the Ugly

Of the three scenarios outlined in the main text, **A New Bipolarity**—marked by a US-China rivalry—appears to be the one the world is slipping into. Yes, the global players should have learned the lessons of the old Cold War, and nobody wants to return to another, but the obstacles to **A New Bipolarity** are eroding. At the core is a growing protectionism throughout the world. Two economic spheres—China at the core in one and the US and Europe in the other—are shaping the global economy. The more that two-way investment is cut by both the United States and China, the greater the chance of an eventual conflict. Militarily, both sides see the other as an enemy. Added to the economic competition is a new layer with the proponents on each side having vested interests in militarily arming against the others—a new version of the Anglo-German naval rivalry before World War I.

Disturbingly, the narratives on both sides are already forming. For Americans, the narrative, which has widespread bipartisan support, revolves around “China owes us.” The Chinese would never have risen without the US allowing them in the World Trade Organization (WTO) and opening the global trading system. That mindset, of course, ignores all the benefits that the United States has derived from China becoming a global economic driver, including preventing the West from sliding into a deeper recession after 2008. For their part, the Chinese maintain an even more deeply rooted assumption that the US will try to stop China from rising at some point in order to preserve the United States’ global position.

To overcome distrust, bold leadership will be required on both sides. In her magisterial study of the period leading up to the World War I,⁶ British historian Margaret Macmillan highlighted the notable lack of leadership that failed to stop the creep toward war. Similarly, Professor Christopher Clark at the University of Cambridge entitled his book on the same period *The Sleepwalkers*. The difficulty for both sides in finding an accommodation derives partly from the diverging systems operating in each country. China is wedded more than ever to a large state sector, while US strength comes from a vibrant private sector. Without better US and Western access to China’s growing market, a high point may have been reached in the *Chimerica* embrace of the last couple decades. The US and other Western governments are ready to limit Chinese access to sensitive technology sectors because of increasing concerns about intellectual property (IP) loss to Chinese competitors. Increasing restrictions on both sides promote distrust and even enmity. Strong leadership will be required to prevent this situation from devolving into a bipolar global order—with far-reaching implications for the rest of the world. Asian countries, particularly, do not want to choose. A bipolar world with its increasing protectionist barriers would probably mean less growth, slowing the potential for emerging market countries to develop.

China has traditionally learned from its mistakes, making course corrections along the way. In the United States, many domestic voices are warning against the increasing protectionist course. In the ***World Restored*** scenario, the US, China, and others pull back from bipolarity. The slower growth experienced everywhere as barriers go up stirs popular unrest, pushing G20 governments after an initial period of disarray to reform global trade. The United States’ containment policy against China eventually becomes too costly; for its part, the Chinese government’s gambit of accelerating innovation while suppressing freedoms hits a brick wall with slower-than-expected advances toward the development of new technologies.

In this scenario, the middle classes in both countries play a key role in shaping the future. All want improvements in economic opportunity for their children. Getting into a tit-for-tat rivalry has little appeal if slower growth is the consequence. Chinese President Xi Jinping is eased out and nationalist governments in the West go down in defeat due to a long period of underwhelming growth. After years in which trade has become more regionalized, a new global trade round is agreed to by the G20 to re-energize global trade and growth.

Global challenges such as climate change and failing states are also a factor, spurring cooperation. Such cooperation leads major powers to engage in more concerted and coordinated peace-building. The leading powers eventually get to the point of agreeing on global defense spending curbs, successfully negotiating new international conventions on banning or limitation of space, biological, and cyber weapons. The peace that results is still fragile, however. Political reform inside China and the West is a prerequisite for a permanent transition to a more peaceful world.

The third scenario—***A Descent into Chaos***—is the worst one. It is driven less by the dynamics surrounding the US-China relationship than by a widespread economic meltdown that is triggered by China suffering a deep economic reversal. The economic turmoil spreads first to China's trading and investment partners in the Global South. The Chinese government teeters, as do many in the developing world. Although a partial recovery occurs over time, high global growth rates do not return. Protectionism spreads and many countries maintain capital controls after the economic crisis has dissipated.

Even before the Chinese reversal, the US has been tightening its restrictions on Chinese investment in its high-technology sector, curbing the number of Chinese students able to study science, technology, engineering, and math (STEM) subjects at leading US universities. With China's slowdown, growth in the US and other advanced economies is also hit and the trend toward protectionism is reinforced.

This scenario encompasses more than economic collapse, though it is a key driver. With political instability spreading, conflict and violence increase. Under public pressure to pull back, the US president withdraws the US presence from the Middle East. Soon a hot war breaks out between Iran and Saudi Arabia and its ally, Israel. Elsewhere, a vicious cycle of authoritarianism leading to revolution spins, followed by a reassertion of even harsher rule and suppression.

Is there any way to stop the descent? No leader believes he or she has the means to stop it. At home in all the major powers, growing populism, nativism, and jingoism come to the fore, militating against saving the world.

Strategic Foresight Needed More than Ever

The earlier *Global Risks 2035* made a plea for leadership. This volume repeats that demand, but adds that better integration of strategic foresight into decision making is needed.⁷ Governance will remain difficult so long as it is about crisis management. Flabbergasted by surprising events, governments have stumbled from crisis to crisis: the financial meltdown (2007/2008), the collapse of Libya and Syria (2010-), the nuclear disaster in Fukushima (2011), the conflict in Ukraine and the annexation of the Crimea by Russia (2014-), the rise of the so-called Islamic State and the proclamation of the Caliphate (2014), the wave of migrants from the Greater Middle East to Europe (2015-), Brexit (2016), and Donald Trump's victory in the US Presidential elections (2016).

Instead of being able to implement visionary and forward-looking strategies, policymakers are being driven by events. The consequence is a widespread feeling of uncertainty up to the highest echelons of the public and private sectors. Leadership throughout the West is in crisis. In their seminal report “Thinking the Unthinkable,” Nik Gowing and Chris Langdon adequately describe this uneasy situation in detail. Their analysis is sobering: “A proliferation of ‘unthinkable’ events ... has revealed a new fragility at the highest levels of corporate and public service leaderships. Their ability to spot, identify and handle unexpected, non-normative events is shown not just to be wanting but also perilously inadequate at critical moments. The overall picture is deeply disturbing.” But even more troubling is the inactivity of leaders despite their collective experience of numbness in all of the above-mentioned crises. “Remarkably, there remains a deep reluctance, or what might be called ‘executive myopia’, to see and contemplate even the possibility that ‘unthinkables’ might happen”, Gowing and Langdon summarize the state of affairs—“let alone how to handle them.”⁸

The challenges of this new world leave us in increasing need of orientation in what is unfamiliar terrain: the fluctuating global economy, epidemics such as Ebola, cyber security, hybrid warfare, the redesign of regional orders (Sykes-Picot, ‘One Road-One Belt’, Eurasia Economic Union as the most-telling examples)—all these are ‘wicked problems’ that defy linear solutions or adhere to recipes of our grandparents’ cooking books.

At the same time, the geopolitical order changes irreversibly. Since a quarter of a century we have been talking about the rise of new powers (BRICS), the decline of the Bretton Woods system, and the dawn of polycentrism. We have described the impact of globalization from Wall Street to Main Street and back; we analysed increasing state fragility, even state failure.

But we only started to react when things got so bad that they couldn’t be ignored any longer or when spill-over effects—such as the wave of Syrian refugees coming to Europe in 2015—affected us directly.

Even worse is our handling of long-term trends: climate change, rising world population, demographic change, urbanization, non-sustainable consumption patterns of a rising global middle class. Addressing these wicked problems of global dimensions demands lateral, not linear, thinking. Government on auto-pilot will not be sufficient any longer, nor muddling through or constant crisis management.

Ignorance, indifference, or inability can have far-reaching consequences in our uncertain and surprise-laden world. To live up to the task, our societies need to invest in strategic foresight and enhanced capabilities for anticipatory governance. Thinking in alternative plausible futures is a prerequisite to build up resilience in a constantly changing environment.

This demands a fundamental review of the roles that government and political administration are expected to play. We all know that ‘the state’ is no longer an omnipresent, omniscient, infallible Leviathan. But it is the

only institution capable of establishing stability and order in a globalized world—if necessary with coercive means.

To reinstate the state, including regional and multilateral institutions, in this uncertain world as an effective instrument for forming opinion and consensus in society as a whole, government institutions need to see themselves as learning, co-creative systems. This is a precondition if they are to develop strategic ability and proactively plan for the future. Conversely, inertia, fear of change and lack of courage result in risks being identified too late and opportunities squandered.

Without such reforms of the role of the state, decline is inevitable. With refurbished governments and multilateral institutions interested in seeing beyond the next crisis and committed to cooperating with others, we have a chance for a new renaissance.

Modeling Complexity: Holistic Strategic Foresight under “Deep Uncertainty”

Ironically, even as we shrink from grappling with the big challenges while we still have time, social scientists are developing many more tools to help decisionmakers deal with complexity and uncertainty, anticipating tomorrow’s surprises. Modeling techniques, particularly, have reached a very advanced and sophisticated level. Simulation models now can embrace a truly holistic worldview by combining different modeling approaches such as System Dynamics (SD), Agent-based Modeling, and Discrete Event Simulation into *one* hybrid approach. In addition, modelers are taking “Deep Uncertainty” and “Dynamic Complexity” into account and utilizing new methods of Exploratory Modeling and Analysis (EMA) to help decision makers deal with high levels of uncertainty.

EMA with its algorithm-based workbench consists of using exploratory models for generating tens of thousands to millions of scenarios (called an ensemble of future worlds) in order to analyze and test the robustness of policy options across this “ensemble of future worlds”— in other words whether the outcomes are acceptable over the entire scenario space. As such, it can be used to generate insights and understanding about the functioning of systems and the robustness of policies. In EMA, the question is not ‘when to measure more’ nor ‘when to model better’, but ‘how to explore and analyze dynamically complex systems under Deep Uncertainty’, and ‘which policies do effectively and robustly improve system behavior under Deep Uncertainty’.

The strength of these new modeling techniques is that exploratory modeling can highlight human actions that would generate desired outcomes across all the possible futures. It can also identify the factors that are critical to any future possibility. If, for example, you want to avoid one of the multiple futures generated by the model, then you would want to know the critical factors underlying that future. Finally, exploratory modeling can be used to model complex phenomena even with data gaps, as happens when modeling, for example, flu outbreaks where information only becomes available over time.

GLOBAL RISKS 2035 UPDATE: Decline or New Renaissance?

UNRAVELING AT HOME

Individual Empowerment: More Unintended Consequences

Middle classes everywhere worry about losing ground. Democratization lags and Western confidence in democracy wanes. Citizenship becomes supplanted by self/group identity, spurred by the internet and social media.

Demographic Outlook: Crunch Time

The West's social welfare system is under serious threat, most likely deteriorating during the next fifteen years. China and other middle-income powers risk facing unsustainable healthcare and pension costs. Only raising the retirement age and encouraging immigration would help mitigate the challenges of supporting an aging population and solve the skills gap, but both issues are politically sensitive.

The Very Poor: A Malthusian World

By 2035, the point of no return could be crossed—after which it will be extremely unlikely that the international community can stop the Earth's temperature from rising by 2 degrees Celsius (3.6 degrees Fahrenheit) and kicking off a dangerous medley of global disasters. The poor are the most vulnerable to a worsening climate; the very poor could be caught in an endless cycle of poverty. The biggest potential impact is likely to be in sub-Saharan Africa, which suffers overpopulation, poor governance, and low agricultural productivity.

Technology: Increasing Downsides

More job disruptions are likely to occur as robotics, artificial intelligence, and automation become widespread. Terrorists will increasingly acquire high technology capabilities, with devastating effects. China will become a peer competitor of the United States in many technological areas, while a breakup of the internet along regional lines looks possible. Technology will further *increase* inequalities within and between nations unless governments intervene.

BREAKDOWN OF THE POST-COLD WAR ORDER

Conflict: Risk at Highest Level Since Cold War

Major state-on-state conflict is no longer unthinkable as the potential for a US-Russia-China arms race heats up. Europe, India, and other countries will be caught in the middle.

Middle East Instability: No End in Sight

Iraq and Syria will remain fragmented with potential for a reversion to conflict. Difficult reform efforts in Saudi Arabia and Gulf states are potentially destabilizing in the short term. Whether Iran acquires nuclear weapons remains an open question as Sunni-Shia tensions continue to escalate and the Joint Comprehensive Plan of Action (JCPOA) disintegrates.

China: Potential Alternative World View

A more economically and technologically self-sufficient China could make way for an alternative order. Whether China gets stuck in the middle-income trap is more than a domestic question. An angry China would be a dangerous regional and global spoiler.

A Post-Western Order: No Clear Path

A United States-led global system was premised on a politically and economically dominant West. Over the next fifteen years, financial regionalization will eat away at the central role of the Anglo-Saxon financial model. The challenge will be to establish a new world order that maintains a modicum of cooperation despite values gaps.

ALTERNATIVE WORLDS

A World Restored

Driven by a global recession as well as domestic upheavals in the West and China, the G20 commits itself to reform the global trade and taxation system, establishing a new contract for the middle class. With a new generation of leaders in power, the dawn of a new era of global cooperation could begin. In a Restored World, the leading military powers agree on a global defense spending freeze, negotiating new international conventions on the ban/limitation of space, biological, and cyber weapons.

Descent into Chaos

Ties among the major powers have been strained for some time and cooperation on any issue has grown very difficult—but the chaos in 2035 is an order of magnitude far beyond anything seen since the end of the Cold War. China's economic crisis derails the Global South, jeopardizing the world economy. The world is divided into regional trading blocs, with competing technological and communication standards. Strongmen who take power in Asia, Middle East, Africa and Latin America guarantee a modicum of stability in between bouts of conflict.

New Bipolarity

The conflict between China and the United States spirals out of control while Russia and the EU increasingly clash along their borders. Europe, Japan, and the US intensify their security cooperation and try to isolate Beijing and Moscow. China and Russia sign onto an alliance. It's only a matter of time before a war occurs between the two sides.

PREFACE

A US Adrift

Much of the stability in the old order hinged on US constancy. For most of the post-World War II period, the United States was head and shoulders above its allies and rivals *materially* and could afford to be generous to its friends as long as others went along with the US making the rules. The United States' ability to build and deploy a Stars War defense shield helped convince the Soviets, falling behind economically, that they needed a different system if they were to compete with the Americans. Eventually those reform efforts led to the dismantling of the Soviet Union. The 1990s saw the United States at the zenith of its power, with productivity soaring with the expansion of the Made-in-USA revolution in information technology (IT).

Even then, there were indications that the US was losing its competitive edge. Educational standards were slipping for most American primary and secondary students. Although globalization reinforced US economic power in the first decade after the end of the Cold War, other countries have begun to turn the tables since then. The momentum behind Beijing's 1979 economic reforms reached a point in the 2000s that China began to be a threat to the United States politically and psychologically. Not only did it look like China would defy the odds and soon become the world's largest economic power, but, in the wake of the 2008 financial crisis, it also cast off any pretension of being a responsible stakeholder under Washington's tutelage.

In the last ten years, the United States has confronted not just China but also a resurgent Russia. The Europeans have largely remained US allies, but not at any price. The US invasion of Iraq divided Europe. President Trump's "America-First" policies—including exacting funding for its North Atlantic Treaty Organization (NATO) security umbrella—have further alienated European publics while frightening many European elites. Many US allies believe the United States is no longer dependable. Japan—even more reliant on the US in its effort to ward off China's domination of Asia—has been especially concerned about Washington's new direction.

The emerging multipolar world was always going to be a challenge—one for which the US was never prepared. The swiftness of the jump from a US that was seen in the 1990s as being like the Roman Empire—ruling for a millennium—to experiencing 9/11, two failed wars, and a devastating global financial crisis that the United States played a part in bringing about defies logic or easy accommodation.

For the administration of President Obama, the partial answer was to pull back from the Middle East, reaching out to US allies with economic diplomacy and reasserting US soft power in the form of two regional trade deals—the Trans-Pacific Partnership (TPP) and Transatlantic Trade and Investment Partnership (TTIP)—that together, it was hoped, would persuade Beijing to adopt liberal market economics. All along, the Obama administration assumed that the domestic fabric could be restored once economic growth resumed and employment picked up despite evidence of increasing inequality. The surprise was that in a recovered US, Donald Trump would be a viable presidential candidate, let alone win the 2016 election.

With the emergence of a multipolar world, the crumbling of the US-dominated old order was no doubt inevitable. How a new order is reconstituted will depend on how Washington wants to play its hand. A US that tried to reassert its unilateralist role with China and Russia would increase the chances that conflict would overtake cooperation in the global system.

Alternatively, a US that renewed itself domestically—showing the world how to reconcile technological disruption with broad-based growth that benefits more than just a few—could recapture the moral high ground with others.

Finally, a US that is adrift, vacillating among different policies—punitive measures against the rest of the world; withdrawal and isolation; or missionary efforts to impose US values—risks undermining the United States' position. As with the Cold War, the effort to rebuild and then sustain US leadership must be long term.



CHAPTER 1

WHY THE SUDDEN US TURN?

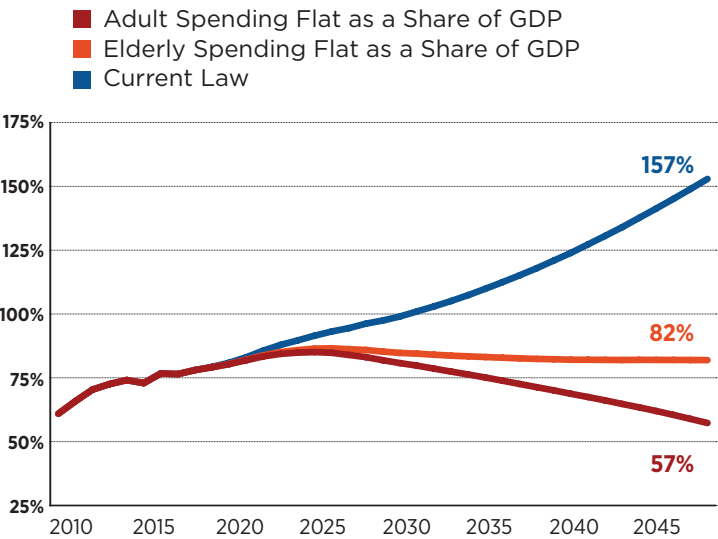
Trump's ascension to the presidency can be explained by domestic pressures, including an American middle class that felt globalization had turned them into losers. Most Americans think of themselves as middle class, so it is necessary to clarify the specific layers that saw themselves as losing out. The top middle-class earners have done extremely well, but the middle segments have not kept up. "The middle three household income quintiles experienced income growth rates of 28 percent from 1979 to 2014 in real terms while the top 20 percent...saw their incomes grow by 95 percent over the same period."⁹ Gaps in wealth have grown even greater: "The top 0.1 percent wealth share increased from 7 percent in 1978 to 22 percent in 2012."¹⁰ Many in that middle core believe that their children and grandchildren are doomed to enjoy lower living standards than themselves. Meanwhile, many social scientists have concluded that income levels do not equate to one's overall welfare. In contrast to the excess hours Americans normally work compared to citizens in other Organization for Economic Cooperation and Development (OECD) countries and relative lack of social benefits, some European countries have found that the secret to "well-being" involves more leisure time despite Europeans' lower levels of income compared to

their US counterparts.¹¹ Who has not had the experience of trying to contact European friends and colleagues in August, only to be told that they have taken the whole month off?

Looking forward, US middle classes are likely to be squeezed even more. Setting aside the challenges of finding sufficient well-paying jobs in the face of rapid technological change (which will be discussed below), the entitlements—Social Security and healthcare—which an increasing proportion of Americans in an aging society depend on, face difficult budgetary futures. By the early 2030s, the trust funds set aside for Social Security pensions, including retirement and disability, will be exhausted. The usual remedies include raising the full-retirement age; lowering cost-of-living adjustments (COLAs); and lessening benefits for specific groups, such as high-income recipients of Social Security. According to the Congressional Budget Office (CBO), no individual option alone would create the long-term stability needed to reform the Social Security system. Several options would have to be combined, and some of these face substantial political obstacles. At this point, policy makers are pushing off the problem for future generations to tackle and absorb the costs.

The story is the same for healthcare. The United States spends 18 percent of its GDP on healthcare—more than twice the average among developed countries, with fewer positive results. Infant mortality is higher than in many other advanced economies, and the cost of medical procedures is also higher. Total spending by the federal government on healthcare programs, such as Medicare, is rising as a proportion of gross domestic product (GDP).

Debt-to-GDP Ratio with Flat Growth for Major Adult and Elderly Programs, 2010-2048



SOURCE: Committee for a Responsible Federal Budget, “Budgeting for the Next Generation: Does the Budget Process Prioritize Children?” August 2018.

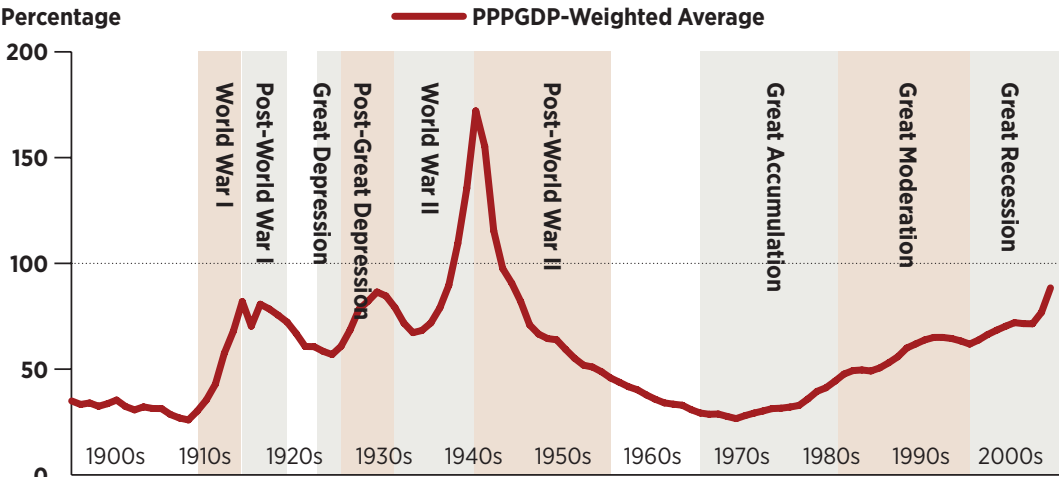
The geopolitical ramifications of all these spiraling costs are underestimated. Under even the most optimistic forecast of the federal budget by the nonpartisan CBO, federal debt rises to a dangerous level of over 118 percent of GDP in 2038. Alternative scenarios—which some experts believe may be more realistic—show even larger annual deficits and overall debt up to as much as 165percent of GDP by 2038.

To avoid a large debt that the federal government could only fund with punitive high interest rates that would dampen economic growth, the US government would need to cut back—possibly radically—on entitlements. Such cutbacks, however, would hurt a large swath of the middle class. The chart below shows the extent to which just trying to maintain flat growth in spending on pensions and healthcare would not stop the accumulation of debt.

Can the US Afford Another War?

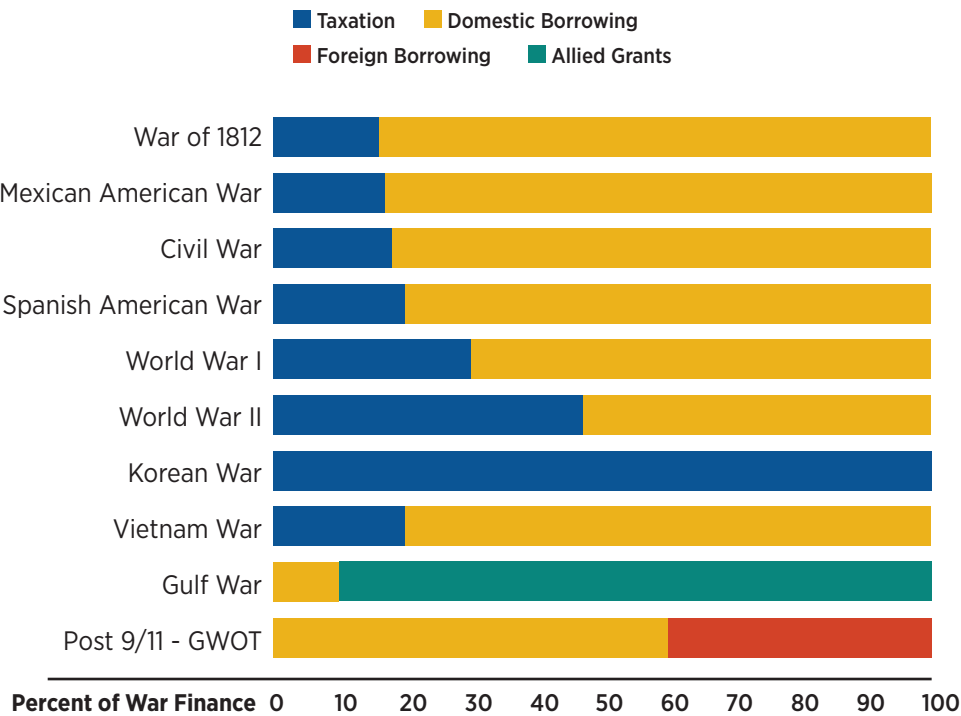
Trump said the Iraq and Afghanistan Wars have cost \$7 trillion¹² since fiscal year (FY) 2001; others dispute that high figure, reporting a figure of \$2 or \$3 trillion.¹³ Obviously, if the United States were to be attacked as it was at Pearl Harbor in 1941, Americans would have no compunction about spending whatever it would take to defeat their foes. For wars of “choice”—many experts believe the 2003 invasion of Iraq was unnecessary—any US administration would face a harder time making the case. Indeed, it is hard to imagine that any wars of choice would be an option in the future, given the existing and growing debt-to-GDP ratio in the US and among its principal allies. Further borrowing on the scale required for a major war would raise interest rates and squeeze available money

Debt-to-GDP Ratio in Advanced Economies, 1900-2011



SOURCE: International Monetary Fund, “Sovereign Debt Composition in Advanced Economies: A Historical Perspective,” 2014.

Variation in United States War Financing Strategies



SOURCE: Rosella Cappella Zielinski, “How Do War Financing Strategies Lead to Inequality,” Boston University, June 2018.

for other uses. To lower the level of borrowing, Washington would have to return to some form of taxation combined with reductions in expenditures on Social Security and healthcare.

US financing of the post-9/11 wars has differed from the way other wars have been financed. The post-9/11 wars have not involved any extra taxation, just borrowing, including on global markets. “The consequence of this war-funding policy has been to transfer the financial cost—including not only the trillions of dollars of current spending, but also the long-term liabilities such as veterans care—to future generations.¹⁴” Viewed through the fiscal prism, the US withdrawal from the Middle East that began with Obama’s decision not to engage in the Syrian war and has continued under Trump (at least so far) may have a structural cause that will affect future presidents. Even those who may want to be more activist will lack the means to do so.

Why Can't the United States Strategize?

In addition to stiff fiscal challenges, the United States faces the question of whether its political system is adept enough to avert crises before they occur. The US political system was built by the founders to be slow and methodical in making changes. Many Americans assume that the private sector, rather than the federal government, should lead, except in areas such as defense. The separation of powers and the system of checks and balances was an effort to curb reckless behavior in favor of restraint and measured actions. Increasingly, the federal government appears only to respond to special interests and is prone to wide swings—from administrations run by Republicans to those run by Democrats. Most US politicians are focused on the next election, making it difficult to engage in concerted action on a five-to-ten-year aspiration, setting aside the difficulty in finding common ground in a highly partisan environment.

In the past, partisan times usually subsided when the country came under attack. Most experts believe that the US is in another period when threats to its national security are rising; indeed, after 9/11 policy makers attempted to work in a bipartisan manner, but that effort only lasted a year or two. Today, partisanship has become increasingly structural, fueled by deep popular divisions and ideological conflict between the political parties. The substantial role played by money means that legislators spend more time on fundraising, helping special interests gain an advantage over the common good. Gerrymandering also makes it harder for systemic reforms to happen because it encourages politicians to appeal to their base rather than the moderate center. A recent Atlantic Council Strategy Paper¹⁵ examining the dysfunctional political system concluded that “without authentic political reform, the country cannot hope to assure its prosperity and security in what could be, and should be, an epic of unmatched human advancement.”¹⁶

The importance of the federal government becoming a strategically minded government cannot be overestimated. Historically, the United States has enjoyed a huge buffer against military attacks because of its geographic separation across two oceans from the rest of the world. With the growing rivalry among the great powers, the United States' margin for error has dwindled as others try to exploit Washington's failures. As the world has become more multipolar, US ability to shape global developments, including norms and values, has become more challenging.

In a study¹⁷ that the Atlantic Council authored with the University of Denver's Pardee Center and The Hague Centre for Strategic Studies that considers a broad range of factors determining power and influence, the main conclusion was that the United States has passed the peak of its influence. “In 1963 the United States possessed 25 percent of the world's influence, 35 percent of the world's power, and 40 percent of the world's economic output. Today, it has 11 percent of influence, 23

Managing a Multipolar World: Four Lessons from History

The interwar years—1920s and 1930s—provide the most recent example of a multipolar global order and, if anything, offer a guide for what not to do. As the Belgian historian, Professor Sven Biscop has shown, four lessons from that period can help world leaders avoid a similar collapse of the global order today:

1 A world order that is created for the express purpose of keeping one of the great powers outside the system is bound to fail. Germany and Bolshevik Russia were excluded from the Versailles Peace Talks with the US excluding itself from the League of Nations even though President Woodrow Wilson was its architect. In today's world, keeping Russia and China outside the international system will not work either; both need to be integrated in order to avoid the same end as occurred a century ago: conflict.

2 If breaking the rules carries no consequences, the world order will be hollowed out and eventually collapse. Japan invaded Manchuria without the League of Nations being able to do anything. Russia annexed Crimea, and China has defied the Hague Court. Although these two countries should not be excluded from the international system, political and economic consequences need to be imposed on Moscow and Beijing for their defiance of the rules.

3 A great power that refuses to invest in the world order cannot expect others to do so. US isolationism after the First World War handicapped the League of Nations. US exceptionalism in the post-Cold War period—the unilateral invasion of Iraq in 2003 to the America-First approach today—gives license to other powers to defy the rules they do not like.

4 A world order that is only imposed and not accepted will not last long. Japan's efforts to establish a Greater East Asia Co-Prosperity Sphere failed because the Japanese sought to accomplish their goals through conquest. All the great powers must learn to respect their neighbors and not try to impose their will on those who are weaker and more vulnerable.

Chinese See Their Global Role Expanding



China plays a more important role than 10 years ago



China 's involvement in the global economy is a good thing

SOURCE: Pew Research Center, "Chinese Public Sees More Powerful Role in World, Names US as Top Threat," October 2016.

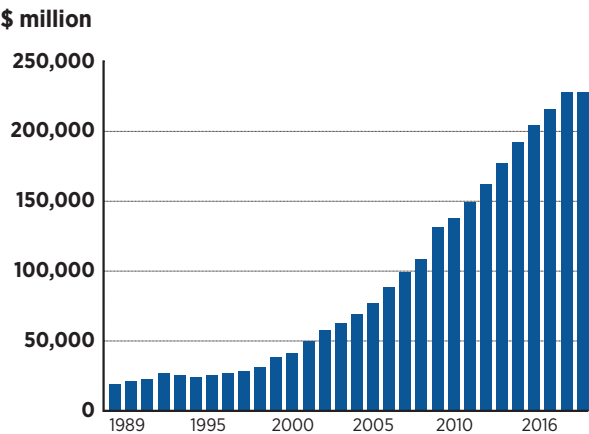
percent of power, and 25 percent of its economic output.”¹⁸ “By 2015, China possessed a significant sphere of influence of its own. The United States retained influence in North and South America as well as with countries in East and Southeast Asia. Europe remained characterized by two spheres of influence, one more dominated by Germany and the United Kingdom, and another by France. Russia retains a relatively small sphere of influence composed of mainly former Soviet Union states. A new sphere of influence has emerged among Gulf States in the Middle East with multiple actors vying for control.”¹⁹

Have China and Russia Overreached?

It takes two to tango, and rising tensions are happening not just because of the US failure to understand the United States’ own limits, but also because other powers are becoming emboldened. The US-manufactured 2008 financial crisis convinced many in China that the United States was in a faster decline than anticipated. After the Chinese quadrupled their economy in a decade and prevented the world from slipping into recession in 2008, many Chinese came to believe that they have a right to play a greater role in the international system and blame the US for holding China back.

Chinese Defense Expenditure

Constant USD (2016)



SOURCE: Military Expenditure Database, Stockholm International Peace Research Institute.

In the military realm, many US military analysts believe China “will be a blue water naval power by 2030.”²⁰ China is looking beyond the maritime areas immediately around it, such as the South China Sea, and is expanding its reach outward toward the Pacific and Indian Oceans. Its dual-use port projects, such as in Sri Lanka, and the construction of a military base in Djibouti will make China a military power in the Indian Ocean in the next decade or so.

China’s One Belt/One Road ambitions—should they be realized—further Beijing’s influence in many different realms, from reinforcing its military expansion to bolstering its economic and technological aspirations. The New Digital Silk Road will not only offer millions access to broadband internet but will also ensure a growing market for Chinese technology companies. In addition, authoritarian leaders in many Belt-and-Road Initiative (BRI) countries will have access to Chinese training in online monitoring and facial recognition, helping to ensure their survival while spreading Chinese influence.

Cynics point out that BRI affords China distinct advantages, but it also brings economic development benefits to countries that have not always been recipients of Western largesse. China should be accorded some recognition for taking the lead on development and investing huge sums in trying to make this happen.

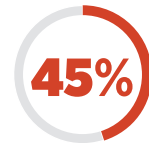
Although state capitalism and authoritarianism may not serve China well in the long run, large-scale state leverage allows China to effectively coordinate all elements of power to boost the country’s international clout and influence. Behind the whole-of-country approach is a unifying narrative that China has suffered wrongs from the international community in the past that only its own actions can correct.

For all its aspirations to be a global power and resentment against the US for putting a ceiling on those ambitions, Beijing still appears to be shying away from a direct confrontation with Washington. For many Chinese, who are struggling economically in their personal lives, China is still a developing country, with living standards way below those of the West. For their part, Chinese elites worry that China is not yet at a point where it can compete with the US technologically. China has made rapid strides, but on numerous measures—such as on talent, patents, R&D spending, and quality of universities—it remains a significant way away

In China, Mixed Views of the United States



U.S. is trying to prevent China from becoming as powerful



U.S. power and influence are a major threat

But Most Are Wary of Looking Inward



Our way of life needs to be protected against foreign influence



Concerned territorial disputes with neighbors could lead to military conflict



China should deal with its own problems

SOURCE: Pew Research Center, “Chinese Public Sees More Powerful Role in World, Names US as Top Threat,” October 2016.

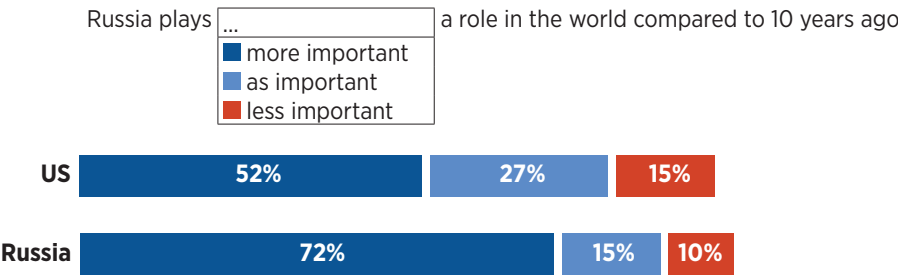
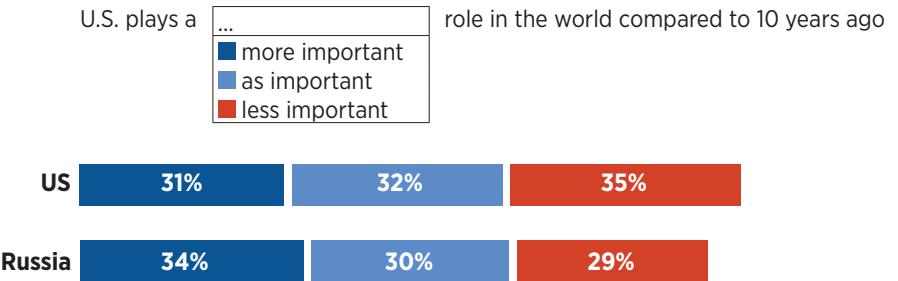
from the United States. Most important, as a testament to US technological leadership, China, South Korea and others are sending its brightest students to US universities.

At its current catch-up rate, however, China will be level-pegging by 2035, if not before. For example, China is the only country in the world other than the United States that has produced a cadre of elite private technology firms capable of marshaling the resources needed to deploy major AI applications at scale: Alibaba, Baidu, and Tencent increasingly compete head-to-head with US technology giants like Google, Facebook, and Amazon in areas such as driverless cars, cloud services, and facial recognition. China is also poised to exert significant influence over next-generation, ultra-fast data networks, with domestic equipment champions Huawei and ZTE set to determine up to a quarter of 5G mobile technological standards. China's 800 million internet users are producing an order of magnitude more data—the fuel that drives improvements in AI—than their American counterparts in key areas such as financial payments.

A more confident China is already becoming more assertive, as shown by its militarization of the South China Sea despite The Hague court's legal ruling in favor of The Philippines, but a US containment strategy may make Beijing even more willing to defy the West, setting it on a dangerous course of confrontation with Washington. As American political scientist Graham Allison has laid out, the track record for peaceful transitions between rising and status-quo powers is not encouraging. A bipolar world—as in the Cold War world—may not be a peaceful one as most of the Cold War one was not—with each side worried about the other achieving military advantage. The risk of major state-on-state conflict is increasing even though such a conflict would not be in the best interests of either country—just as it was not in the best interest of any of the major powers headed into World War I. Domestic politics and leadership in both countries will be important factors in determining whether conflict occurs or not. Nationalism—which has been rising in both the US and China—is a powerful force that cannot be easily tamed. Any leader will need guts and determination not to bow to rising nationalism, which is linked to populism.

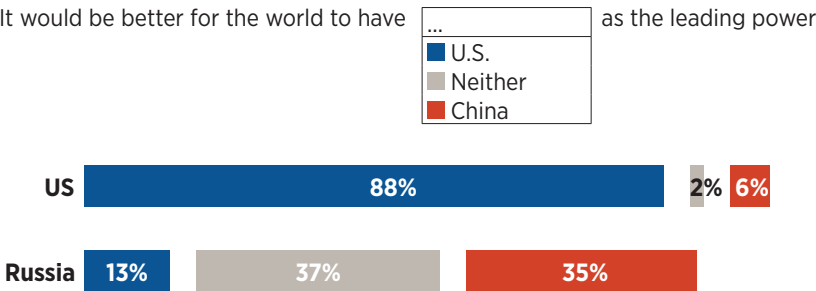
Under Putin, Russia has become aggressive countering the West. Believing the West has been waging war against Russian interests and values, the Russian President has looked to the East, specifically China, as a counter to declining ties with the West. Like other continental powers, Russia always has the alternative to turn eastwards, not just towards the West. China—because it rejects Western values like democracy—has become more attractive to Russian leaders. Scholars trace the eastward tilt to establishment of the Shanghai Five in 1996 which grouped together Russia, China, Kazakhstan, Kyrgyzstan, and Tajikistan. All the rulers in those countries shared similar interests in stability. Five years later the Shanghai Cooperation Organization (SCO) was established that deepened the cooperation and which has since expanded its membership. Like the BRICS, such a regional organization offered a leadership role for Russia. It also brought together allies who in one form or another rejected the Western vision for global order. State capitalism was preferred to market economies and

Russians And Americans Generally Agree On Each Country's Changing Role In The World Over The Past 10 Years



SOURCE: Pew Research Center, “Six Charts on How Russians and Americans See Each Other,” October 2018.

Americans Prefer Themselves Over China as World Leader, But Russians Prefer ‘Neither’ Over the United States



SOURCE: Pew Research Center, “Six Charts on How Russians and Americans See Each Other,” October 2018.

Western-style democracy was largely rejected. Russia together with its partners was developing new concepts of global governance, one in which state sovereignty was given more prominence.

Over the longer term, though, it's likely Russia will want an accommodation with the West for economic, political and strategic reasons. Throughout its history, Russia has had periods of outreach and desire for integration with the West only to be followed by isolation. Foreign Minister Lavrov has talked about the current period as resembling the aftermath of the nineteenth century Crimean War when France sought allies against a rising Imperial Germany in the aftermath of its defeat in the Franco-Prussia War and struck an alliance with Tsarist Russia, bringing it out of its isolation. For most of the twentieth century, after the Bolshevik Revolution, Russia has been at odds with the West, except during the Second World War, after Nazi Germany's invasion until the outbreak of the Cold War. The bulk of Russia's population continues to be in the European portion. Russians feel more European than Asian. With energy demand increasing in Asia, it makes sense for Russia—as one of the world's biggest energy producers—to orient itself to the East. But, Gazprom will remain reliant on sales of natural gas to Europe for some time to come.

We all need to show some humility when forecasting Russia's future. Too many experts have predicted the decline—if not breakup of Russia—ever since the end of the Soviet Union. Viewed solely through an economic lens, Russia has dramatically declined. At its peak, the Soviet economy was one-third the size of the US economy. It's now one-fifteenth the size of the American economy.²¹ The Russians outside Russia earn 20 percent above the mean of those inside Russia. Very significantly, many of those Russians residing in Germany and the US have the high skills needed by Russia for its development. The entire Russian middle class is only 10 million out of a total population of almost 144 million. Putin can only be said to have arrested, not stopped the decline when it was in freefall after the end of the Cold War. Most likely his successor will have his work cut out for him to arrest again the downward trajectory, if only for strategic reasons to ensure Russia is able to afford its military and not be seen as too much China's junior partner.

Russia's structural problems should not obscure its ability to play a key role in international affairs. In part because it is a nuclear power, remains a large arms exporter and has learned to wield superbly the newest weapon—cyber—in the great powers' arsenal, it has been able to punch above its economic weight. Moscow has also been adept at taking risks with its annexation of Crimea and intervention in the Syria civil war, the latter particularly increasing its influence in the Middle East to the detriment of the US and Western powers. Its geographic position in between east and west with access to the Middle East further increases its potential for acting as a bridge. Counting out Russia as a future player has only led to shock and surprise and would be equally reckless in the future.



U.S. President Donald Trump
and Russia's President Vladimir
Putin shake hands as they meet
in Helsinki, Finland July 16, 2018.
REUTERS/Kevin Lamarque



CHAPTER 2

MIGRATION: GOOD AND BAD NEWS

Migration has long been a global trend spurred by increasing levels of development and aspirations of betterment for those choosing to leave. For receiving countries such as the United States and some European countries, it has become a politically charged topic, fueling Far Right movements as much as inequality and feelings by many citizens of being left behind.

Why Now?

Immigration is not new. Immigrants composed a slightly larger proportion of the American population—14.7 percent—in the early twentieth century than today, but the US foreign born are on track to surpass that earlier milestone in coming years. The United States has been the main country of destination for international migrants since 1970. Since then, the number of foreign-born people residing in the country has almost quadrupled—from less than 12 million in 1970, to 46.6 million in 2015²²—but the number of migrants to the US and other receiving countries has increased. Indeed, that number—almost

254 million in 2015²³—is an increase over the 173 million migrants in 2000. While the numbers have increased substantially, the proportion—around three percent—of the world’s population who are migrants has remained steady.

In 2016, 22.5 million people in the world were refugees—the highest number on record. In addition, 2.8 million people were asylum-seekers in 2016, with Germany far in the lead (720,000) as the destination country that year due to the inflows from the Syrian civil war, followed by the United States (262,000) and Italy (123,000).²⁴

Why is the number of international migrants increasing? Part of the answer is no doubt linked to the ease of travel. Those thinking of emigrating or seeking asylum can easily map out routes and identify destinations. It is no coincidence that high-income countries are the recipients of most migrants (but not asylum-seekers). Most migrants are economically driven: they want a better and more prosperous life for themselves and their children. With the expanding number of middle-class citizens in the Global South and East, it is not surprising that the rate of emigration is on the rise. The chart below shows that as per capita incomes increase, emigration to another country increases and then falls back as income levels in the origin countries rise. Presumably, with income levels rising, economic opportunities are much more numerous at home, slowing the rate of emigration. This trend will not abate soon: GDP per capita is still quite low in a large number of developing countries. With the internet and social media showing more of the opportunities available elsewhere and more and more countries becoming middle class but still struggling to develop fully, the time for countries to transition to much higher GDPs—which will encourage more people to stay at home is likely to be lengthy.

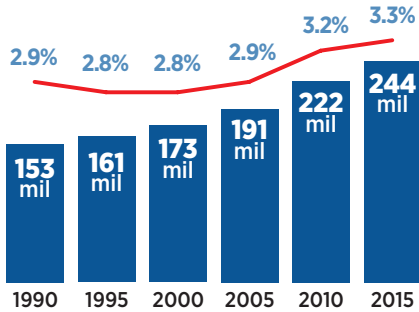
Number of Foreign-born in the United States by year

| Year | Number of foreign-born | Percent foreign-born |
|------|------------------------|----------------------|
| 1850 | 2,244,602 | 9.7 |
| 1860 | 4,138,697 | 13.2 |
| 1870 | 5,567,229 | 14.4 |
| 1880 | 6,679,943 | 13.3 |
| 1890 | 9,249,547 | 14.8 |
| 1900 | 10,341,276 | 13.6 |
| 1910 | 13,515,886 | 14.7 |
| 1920 | 13,920,692 | 13.2 |
| 1930 | 14,204,149 | 11.6 |
| 1940 | 11,594,896 | 8.8 |
| 1950 | 10,347,395 | 6.9 |
| 1960 | 9,738,091 | 5.4 |
| 1970 | 9,619,302 | 4.7 |
| 1980 | 14,079,906 | 6.2 |
| 1990 | 19,767,316 | 7.9 |
| 2000 | 31,107,889 | 11.1 |
| 2010 | 39,956,000 | 12.9 |

SOURCE: Campbell Gibson and Kay Jung, Historical Census Statistics on the Foreign-Born Population of the United States, Population Division, US Census Bureau, February 2006.

Snapshot of International Migrants

The international migrant population globally has increased in size but remained relatively stable as a proportion of the world’s population.

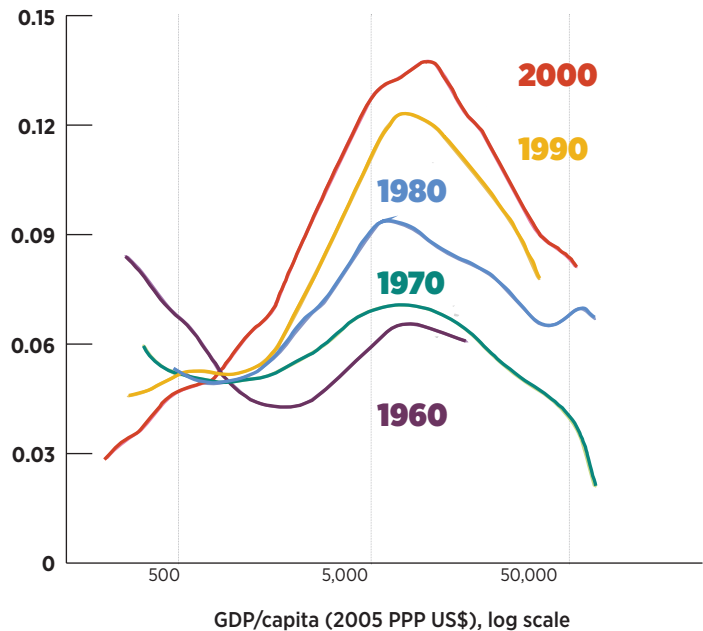


SOURCE: “World Migration Report 2018,” International Organization for Migration.

GDP Per Capita and Emigration

Relations Between a Country's GDP Per Capita and the Share of Emigrants Within its Population, 1960-2010

Emigrant stock/population



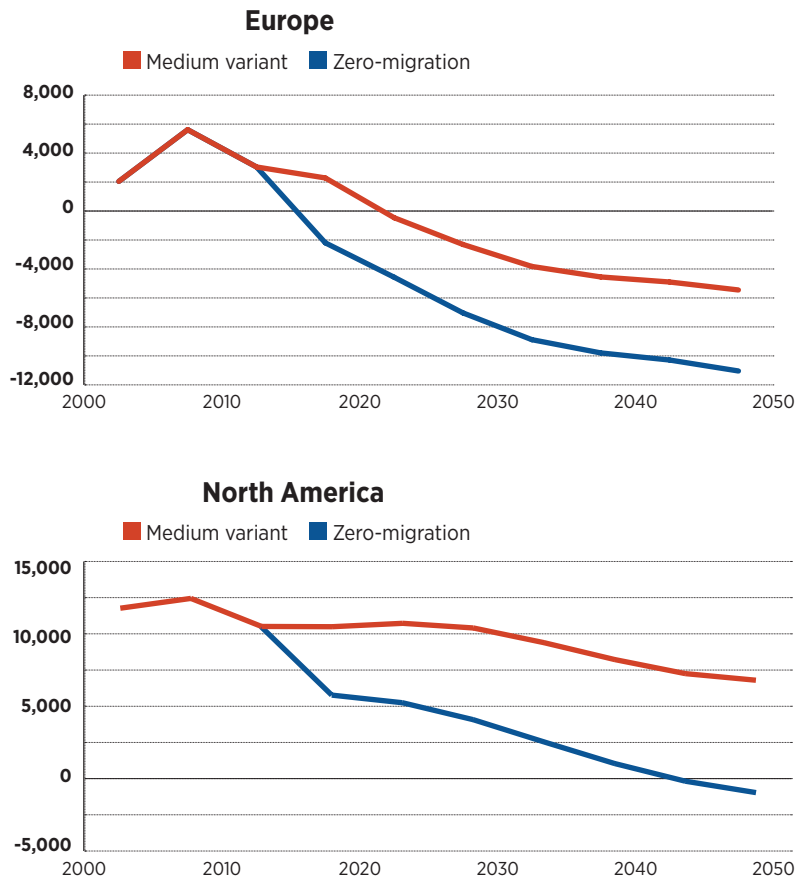
SOURCE: Michael A. Clemens, 2015, "Does Development Reduce Migration?", in Robert E. B. Lucas, ed., International Handbook on Migration and Economic Development.

Could Immigrants Be Welcomed in the Future?

Current research indicates that Western publics have become increasingly polarized over the immigration issue. Liberal opinion in the US sees diversity as an asset, while a strong conservative minority sees immigration as threatening a future white majority. Elsewhere in Europe, concern is growing, even in traditionally liberal countries like The Netherlands, about Europe's cultural identity being overwhelmed by immigrants from Africa and the Middle East. Far Right groups have been given a boost by these growing social and cultural worries.

Nevertheless, positive net migration contributed to 42 percent of population growth in North America²⁵ between 2000 and 2015. According to the United Nation's (UN's) International Office of Migration (see chart below), populations in both Europe and North America (US and Canada) would decline in the next few decades without net migratory in-flows. With the knowledge economy becoming more important, more countries are opening their doors to highly skilled immigrants who can fill in employment gaps that native born citizens are not qualified for. Even President Trump, an ardent critic of US immigration practices, has called for more highly skilled workers to come to the United States.

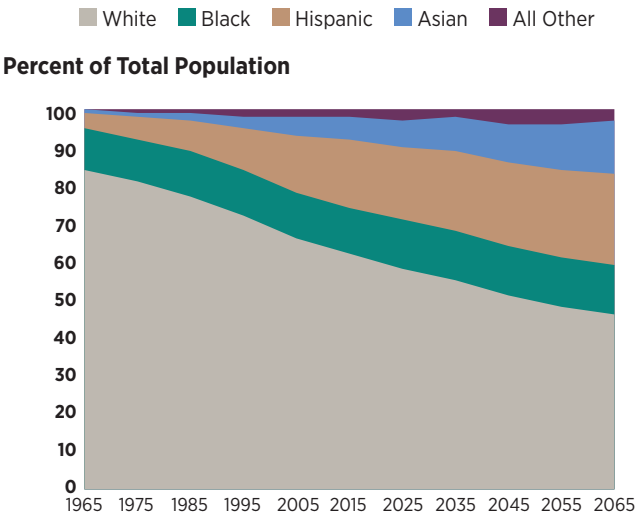
Estimated and projected change in total population over five-year time periods by region, from 2000 to 2050, with and without international migration starting in 2015 (in thousands)



SOURCE: United Nations, World Population Prospects 2017.

Experts do not know exactly how the development of robotics, automation, and AI will affect the demand for low-skilled workers, particularly for the jobs that immigrants fill. Many immigrants into the US have traditionally played a critical role in harvesting fragile fruits and vegetables. This could change as robotics advances and becomes cost effective. Recently, for example, a US robotics company has developed a prototype of a strawberry-picking combine, but the founder admitted the difficulties: “Any four-year-old can pick a strawberry, but machines, for all their artificial intelligence, can’t seem to figure it out.” Pitzer, an expert on robots and co-founder of a company called Harvest CROO Robotics, says “the hardest thing for them is just finding the fruit. The berries hide behind leaves in unpredictable places.”²⁶

The Changing Face of America, 1965–2065



SOURCE: Pew Research Center, “The Demographic Trends Shaping American Politics in 2016 and Beyond,” February 2016.

Could migration—which is so important to demographic and economic health—become a less politically contested issue? The Pew Research Center has found that the share of Americans saying that legal immigration should be decreased has been declining since 2001. The proportion of Americans who express sympathy for illegal immigrants is surprisingly high (69 percent), with young Americans more likely than older ones to express sympathy and blacks and Hispanics more likely than whites to have sympathy for illegals.²⁷ Over the longer run, the fact that the US is rapidly becoming a majority nonwhite population is likely to increase the chances that diversity will be even more accepted than it is today.

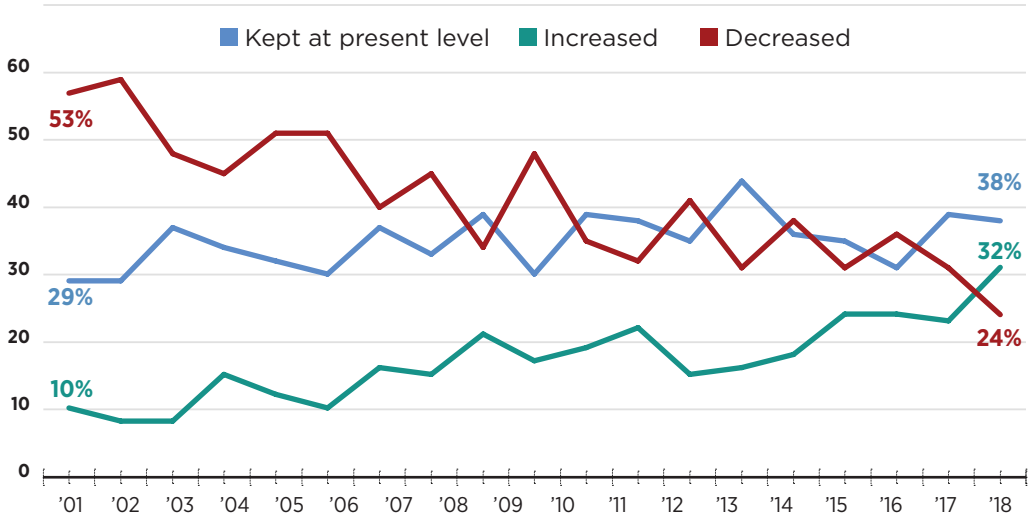
Elsewhere in Europe, immigration may well remain a contentious issue. Although immigrants represent small minorities compared to the total indigenous population, overall sentiment in several European countries has not been predisposed to acceptance, deepened by the political divide and growing populism.

According to the UN, most immigration has occurred within Asia, but the proportions of international migrants are miniscule in large countries like China, India, and Pakistan. Only in the Gulf (classified by the UN as part of Asia) and in small city-states such as Hong Kong are there significantly large percentage of migrants compared to the relatively small populations in those city-states. There are, for instance, only 1 million migrants in China; 2.3 million in Japan; 1.2 million in South Korea and 5 million in India. Many experts say that diversity is essential for innovation; clearly Asia is thinking in different terms.

Like the West, many of these countries are aging quickly, so they may need workers from other countries to fill both low- and high-skill-level jobs that indigenous populations are not interested in doing.

Since 2001, decline in the share saying legal immigration should be decreased

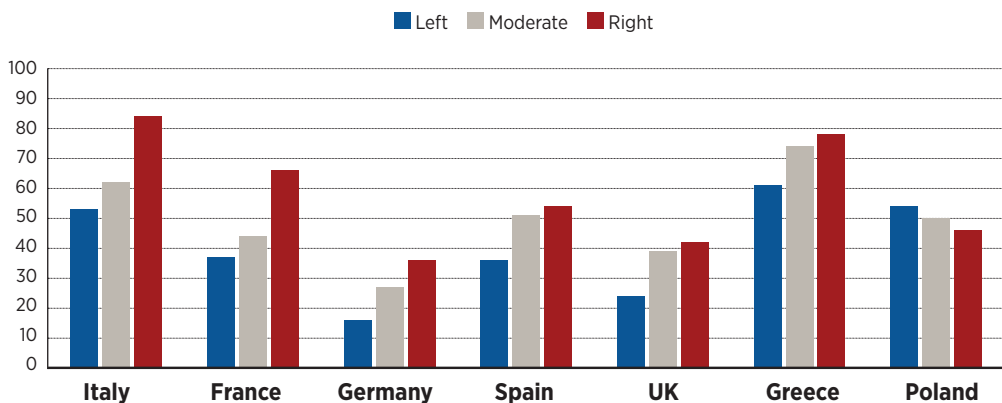
Percent who say that legal immigration into the United States should be ...



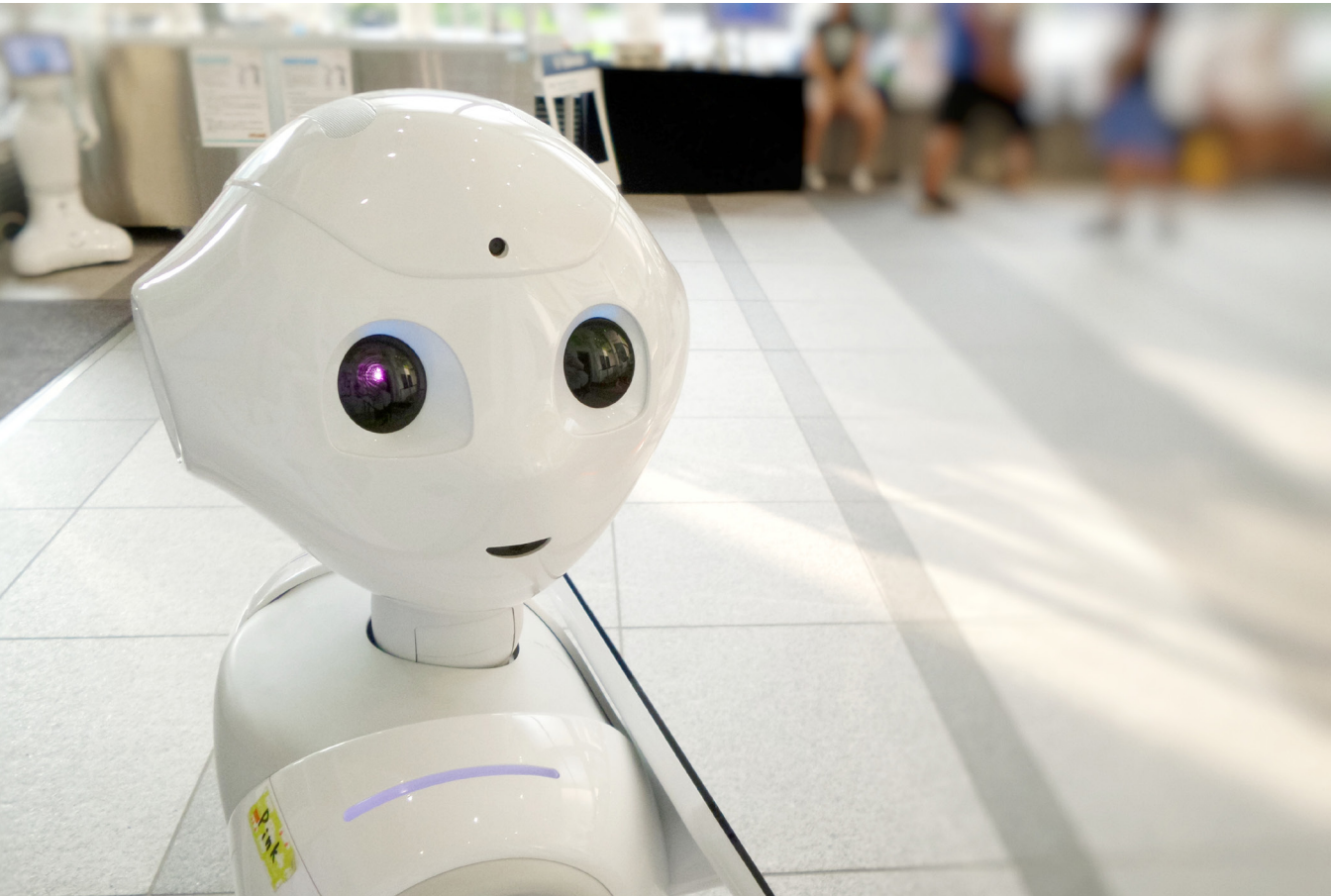
SOURCE: Pew Research Center, "Shifting Public Views on Legal Immigration into the United States," June 2018.

Right More Likely to See Immigrants as Economic Burden

Percent saying immigrants are a burden because they take jobs and social benefits



SOURCE: Pew Research Center, "Global Attitudes Survey," 2014.



CHAPTER 3

TECHNOLOGY: MYTHS AND REALITIES

Global Risks 2035 discussed the multiple technology revolutions advancing at rapid speed with far-reaching consequences in many dimensions. At the geopolitical level, US policy makers worry that the US innovation lead is slipping with China filling in the gap, threatening broader US power in the global order. Domestically, many Americans worry about losing their jobs as AI, robotics, automation, and other technologies become smarter. Some are also concerned that the technology sector is getting too concentrated, dominated by a handful of giants who are gobbling up start-ups and their new ideas. All this has been spurring a growing public backlash against technology. Unfortunately, which of these fears are momentary and which are closer to reality is likely to be unknown for some time, adding to the increasing discomforts around emerging technologies and diminishing appreciation for the benefits to be derived from them.

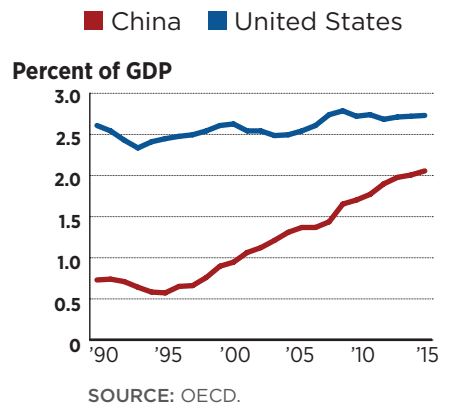
United States vs. China

Time will tell which country will be the winner. In the view of many Chinese, the United States has such built-in advantages that China will not catch up—let alone surpass—the US for decades. For their part, some US experts believe that China has a distinct advantage in that its civilian R&D is more closely integrated into its military sector, allowing it to more rapidly exploit the dual-use possibilities of AI, robotics, and other emerging technologies. In contrast, some—but not all—US technology firms and their workforces are leery of defense contracts, because they do not want to get involved with any new technologies that might be used for killing or repression.

China—which is sinking immense resources into R&D—has made substantial strides. A comparison (see below) shows that Chinese R&D spending is approaching US levels. Chinese graduates are increasing in number and concentrated in STEM fields. Venture capital (VC) is more available to Chinese start-ups in early development phases than for US start-ups, although there are recent indications of a major 2018 dip in private-sector financing.

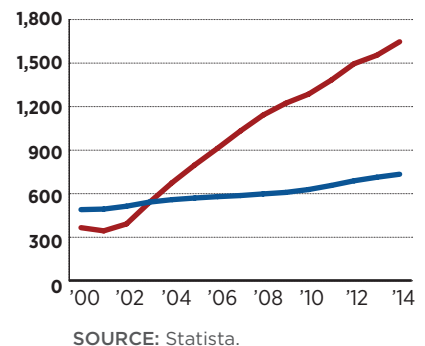
US universities are still the best, which is why 350,000 Chinese students study annually at them, many being educated in STEM subjects. The quantity and quality of Chinese “triadic” patents lags behind the United States, Japan, and Germany. To offset some of its weaknesses, China has a big built-in advantage: immense stores of data. Large amounts of data are needed to refine and enhance the algorithms behind AI. China is further along than the United States in becoming a cashless society with consumers leaving heaps of information on their likes and dislikes—all of which Beijing is vacuuming up into great quantities of Big Data. Privacy is not a concern, as in many Western societies. China’s WeChat and other social media can also reveal a person’s political views, valuable for detecting dissent and opposition. With 1 billion internet users as of 2017 and internet penetration still growing, China is a huge market for technology products and services. The recent dip in Apple’s stock due to slowing iPhone sales in China shows the importance of its market

Chinese R&D spending is rapidly approaching US levels



Chinese universities award the most STEM bachelor’s degrees in the world

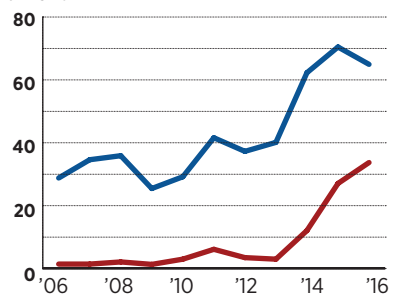
Number of STEM Bachelor Degrees
thousands



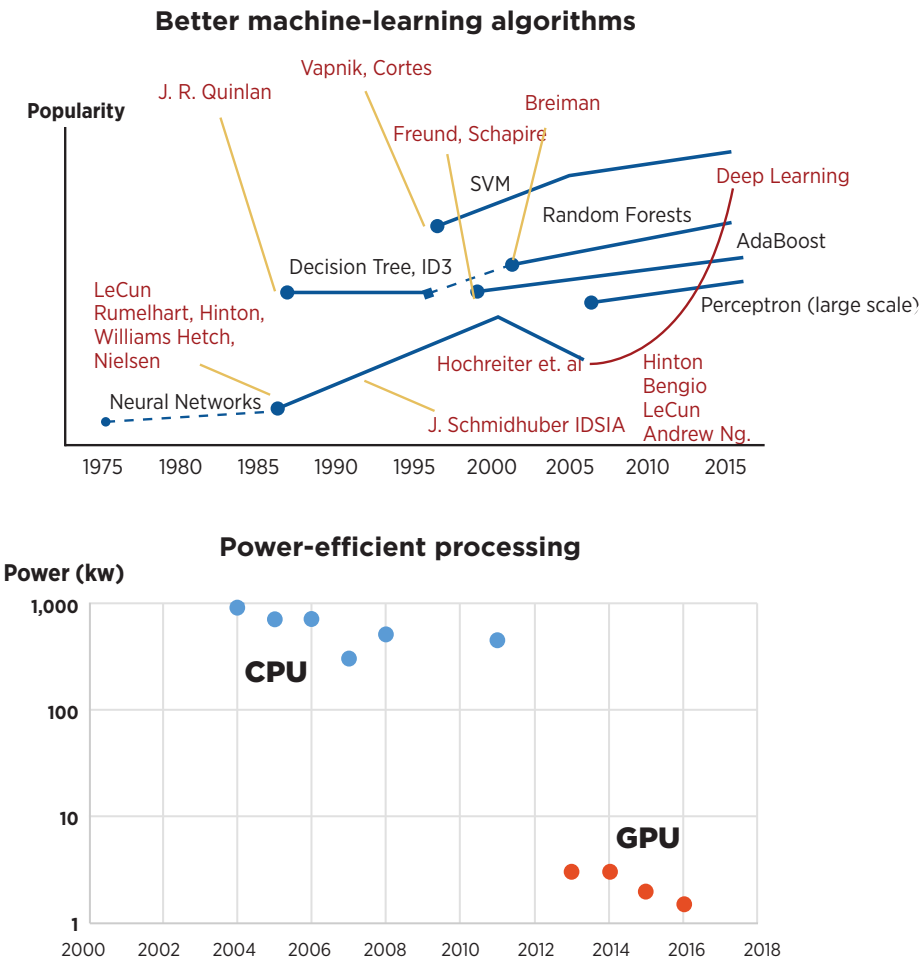
Chinese venture capital investments account for nearly 40 percent of the global total

VC Investment

\$ billions



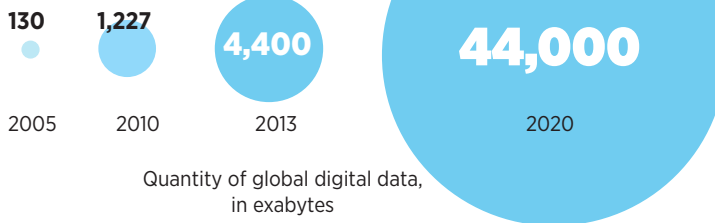
KEY ENABLERS OF SECOND WAVE AI



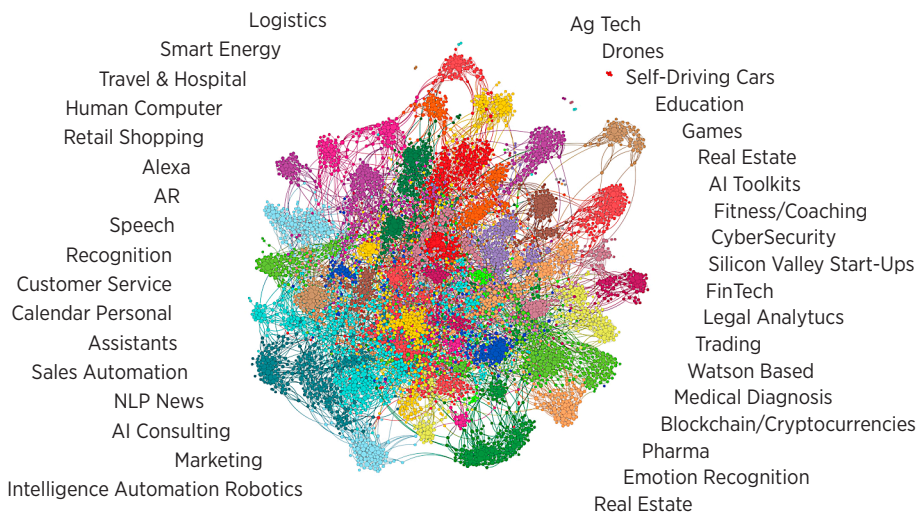
place for Western as well as Chinese companies. Finally, China’s technology advances have accelerated, giving rise to concerns that the West’s liberal market economic systems are not as effective as Beijing’s state capitalism. Moreover, Beijing is the one coming up with the big ideas, such as its Belt-and-Road Initiatives.

Lost in much of the focus on China is how other developing countries are faring. At one time, technology was seen as a “leveler,” helping emerging markets leapfrog as long as they invested in technology. Certainly, China is testament to that hope, but other developing states are actually falling behind. A Harvard Business School study on the diffusion of fifteen technologies in one hundred sixty-six countries showed that adoption lags have diminished extensively across the globe, but they have not diminished intensively. In other words, while a new technology may reach a developing country faster than ever before, it is not necessarily reaching the majority of people in that country. Significantly, the study found that differences

Big data and cheap storage



Extensive industrial opportunities



in the intensive margin of technology adoption account for some 45 percent of cross-country differences in per capita income. This intensive margin has not converged at the same rate as extensive margins. In fact, it has diverged. With greater per capita incomes and high educational skills an increasing prerequisite, many poor countries do not have a chance to advance technologically in the short term. Nevertheless, educational achievement is expanding quickly, and while per capita income could vary in the future, great strides have been made in past decades as millions have been pulled out of poverty. A recent World Bank study reported²⁸ increasing achievement in developing countries, but significant gaps remain. The Atlantic Council's recent *Global Sweepstakes* study of 20 technology hubs around the world projected that by 2030, there will be a hierarchical order—not a level playing field—with only the United States and China at the very pinnacle; other advanced economies will be significantly below these top contenders, with developing and poor countries lagging significantly.²⁹

Technological achievement in developing countries relative to that in high-income countries

Percent of level in high-income countries

| | Scientific Innovation and invention | Penetration of older technologies | Penetration of recent technologies |
|-------------------------------|-------------------------------------|-----------------------------------|------------------------------------|
| High- income countries | 100.0 | 100.0 | 100.0 |
| Upper-middle income countries | 3.3 | 58.4 | 49.6 |
| Lower-middle income countries | 0.6 | 41.6 | 31.8 |
| Low-income countries | 0.1 | 23.7 | 22.7 |

Increase in technological achievement in developing countries relative to that in high-income countries

Index, percent increase in high-income countries = 100

| | Scientific innovation and invention | Penetration of older technologies | Penetration of recent technologies |
|-------------------------------|-------------------------------------|-----------------------------------|------------------------------------|
| High- income countries | 100.0 | 100.0 | 100.0 |
| Upper-middle income countries | 191.6 | 220.8 | 162.3 |
| Lower-middle income countries | 157.1 | 251.8 | 145.8 |
| Low-income countries | 63.7 | 480.4 | 411.3 |

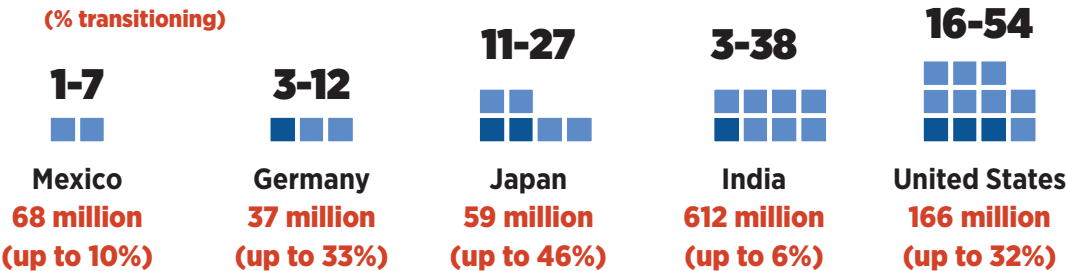
SOURCE: World Bank, “Global Economic Prospects,” 2008.

Globally, up to 375 million workers may need to switch occupational categories

Number of workers needing to move out of current occupational categories to find work, 2016-30 (trendline scenario)
Millions (1 block= ~5 million)

- Additional from earliest adoption scenario
- Midpoint automation scenario

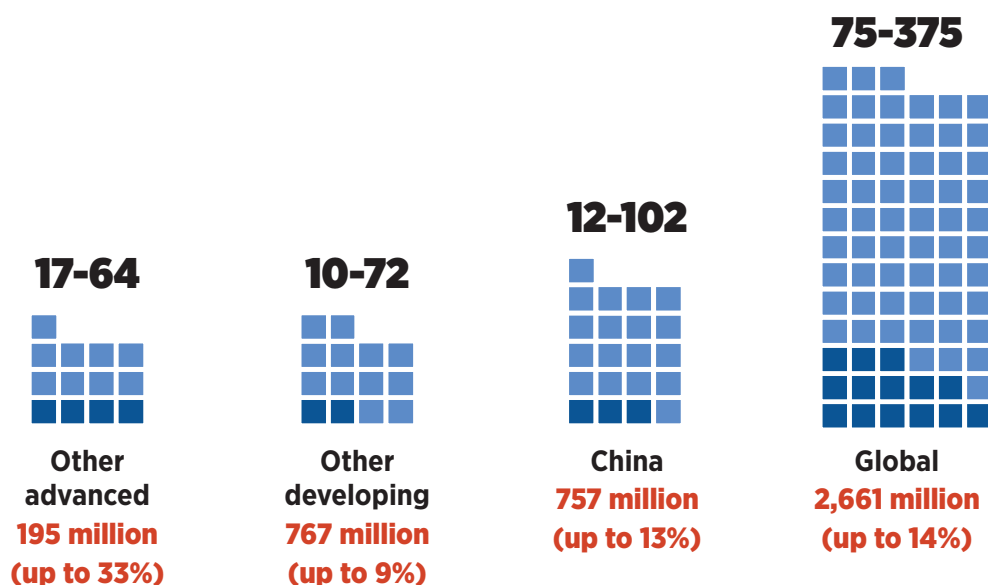
2030 workforce
(% transitioning)



Some occupational data projected into 2016 baseline from latest available 2014 data.

If the technology revolution can reinforce inequalities among countries, Western publics are already worrying that it will do the same domestically. Some job categories—not just at the low or medium levels—could disappear. Many more could be disrupted—meaning that part of the jobs could be automated, leaving workers to readjust and retrain in other skills. Forecasters do not know how many jobs could be created. Job disruption has been a feature of all other technological revolutions, but no one can say this time how fast replacement jobs will come online or whether workers with low or medium skills would even be qualified for them. Fear and insecurity have been the result, fueling the rise of populism and nativism. The problem for policy makers is that this is a rolling revolution. Most scientists believe we are only at the second stage, for example, of the AI revolution. There *could* be years or decades of job disruptions before new jobs appear. For the moment, the World Economic Forum assesses that workers in the US and Germany might be more likely to be affected than those in China and other emerging markets. This is because there is a greater penetration of IT and potentially more AI and robotics impacts to business operations in Western countries than elsewhere. Over time, emerging technologies will disrupt jobs in emerging market countries, too.

Along with job insecurity and declining wage levels for the less skilled is the issue of growing income and wealth inequalities. Inequalities have been creeping up for decades, but there is now more evidence that technology has increased the momentum of the growing gaps. Those with the right skills or capital ownership have seen their income and wealth increase disproportionately. A more consolidated technology sector with a handful of companies dominating it could further accentuate the existing inequality trend, adding to the social and economic concerns of the accelerating technology revolutions.

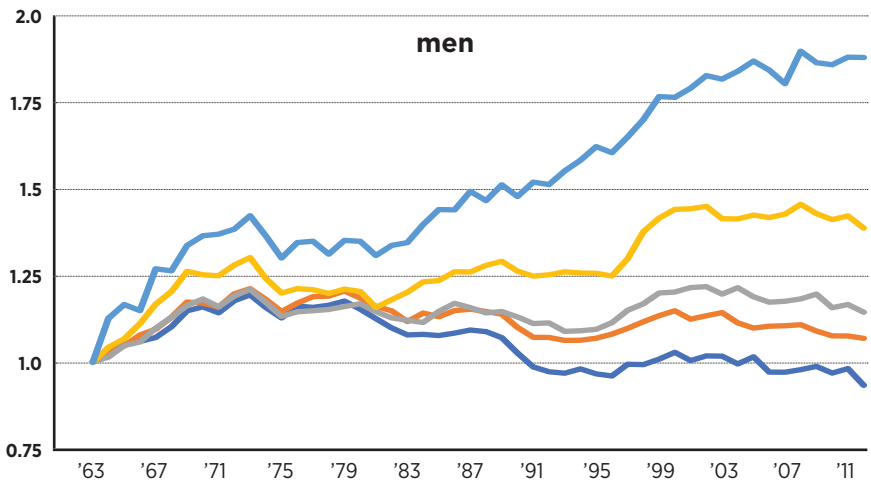


SOURCE: McKinsey Global Institute, "Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation," December 2017.

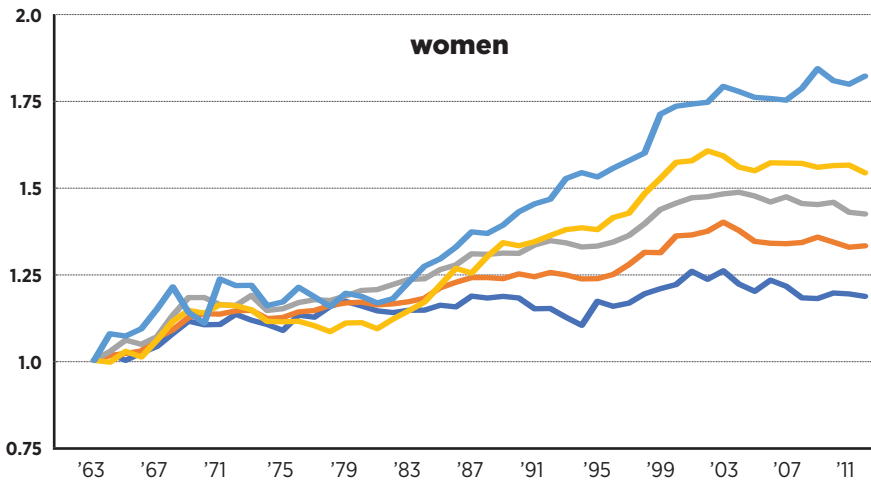
Changes in real wage levels of full-time U.S. workers by sex and education

- >Bachelor's Degree
- Bachelor's Degree
- Some College
- High School Graduate
- High School Dropout

Real weekly earnings relative to 1963



Real weekly earnings relative to 1963



SOURCE: David Autor, "Skills, Education, and the Rise of Earnings Inequality Among the 'Other 99 Percent,'" Science 344 (2014): 843-851.

How Much of a Backlash?

The media is replete with stories about potential parallels between the nineteenth century Luddite Revolution and today's technology trends. The Luddites—British textile workers who destroyed automated looms because the new technologies of the day made the workers' jobs obsolete—may have caused physical damage, but they did not stop Britain's Industrial Revolution. The United States and other countries should expect political impacts from job insecurity and declining relative wages in some occupations, but a mass revolt against new technologies is far-fetched. Current lifestyles are already so dependent on automation that no one would be able to go back to an earlier era. Nonetheless, some experts are concerned about how the technology sector has become too concentrated and wonder whether the largest technology firms are too powerful. Google and Facebook “control more than 58 percent of total US digital advertising spending in 2017,” according to eMarketer while Amazon looks like it will capture nearly half of the US e-commerce market in 2018.³⁰ Economists worry that such dominance is undermining competition by smaller firms. Social scientists fear that “superstar companies are grabbing a swelling share of revenues while workers suffer from pedestrian wage growth.”³¹ A decade after the 2008 financial crisis, US unemployment is at a historic low, but wage levels for most Americans are only now beginning to rise. The European recovery has been much weaker.

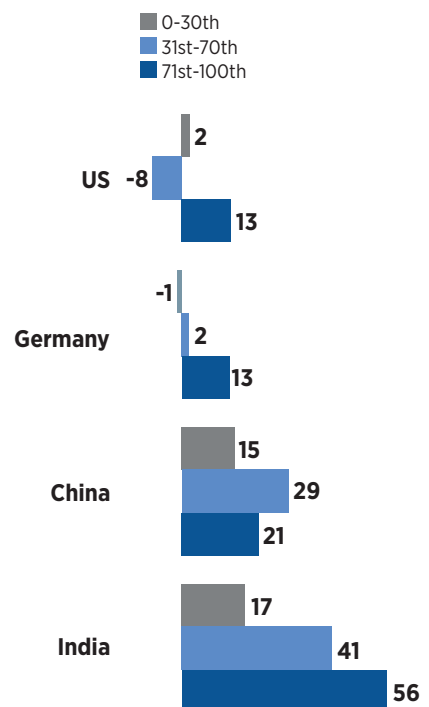
Mainstream economists and even some technology industry leaders are increasing their calls for more regulation. More important, roughly half of the US public believes the major technology companies should be regulated more than they are. Fifty-three percent of Americans support regulations for the internet's major platforms similar to those of banks. Europe is already taken the lead with its Global Data Privacy Regulation, which requires businesses and other organizations to protect personal data and privacy that will probably become the standard applied elsewhere.

Some in the information and communications technology (ICT) industry portray regulation as a death knell for technology: PayPal cofounder Peter Thiel has famously warned that “we are in a deadly

Middle-wage Jobs May Fare Well in Emerging Economies But Lose Out in Advanced Economies

Net job change by wage tercile, step-up scenario

Percent +/- from 2030 labor supply due to automation and labor demand catalysts



SOURCE: McKinsey Global Institute, “Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation,” December 2017.

race between politics and technology” and “the great task for libertarians is to find an escape from politics in all its forms.”³² Nonetheless, US economic history is replete with examples of new technology unleashing new economic forces that over time are seen as creating too many negative complications. In the Gilded Age, the effort to stem the overconcentration in industrial production led to President Theodore Roosevelt’s trust-breaking, including ending Standard Oil’s monopoly position. Capitalism nevertheless continued to flourish in the twentieth century and indeed saw its finest hour in helping the US win the Second World War and expanding the middle class in the decades to follow.

Urgent Need for More Oversight of Communications Revolution

Emerging AI tools will provide propagandists with radically enhanced capabilities to manipulate human minds. Human cognition is a complex system, and AI tools are very good at decoding such systems. Interactions on social media, browsing the internet, and even grocery shopping provide thousands of data points from which technologists can build psychological profiles on nearly every citizen. When provided rich databases of information about human beings, machines will know our personalities, wants, needs, annoyances, and fears better than we know them ourselves. During the next few years, machine-driven communications (MADCOMs)—integrated with AI systems for use in computational propaganda—will gain enhanced ability to influence people. Online communications will be tailored to persuade, distract, or intimidate individuals based on their unique personalities and backgrounds, a form of highly personalized propaganda.

The difficult truth is that humans simply cannot compete with MADCOMs’ ability to manipulate in real time. On the digital networks of the next decade, only humans teamed with AI machines can compete with AI machines. Much like the cybersecurity struggle that dominates the early twenty-first century, the internet will be the battleground for a continual cycle of one-upmanship as technologists improve adversary-MADCOM detection tools and as propagandists improve MADCOMs to avoid detection.

An ideal future, in which MADCOMs are used for the benefit of humanity rather than its detriment, requires the effort of all levels of society, from the international system down to individuals. The community of democracies must recognize the serious threats posed by MADCOMs, computational propaganda, and weaponized narratives. Democracies must move aggressively to address these threats on multiple fronts by crafting comprehensive strategies to protect their populations from online propaganda and disinformation, while maintaining the core democratic values of equality and liberty.

The technology sector must develop tools for protecting the public from emerging manipulative technologies and should develop shared principles and norms governing their behavior. Academia should research the impact of MADCOMs and develop tools and systems to mitigate risks. Finally, individuals have an obligation to understand the ramifications of emerging technologies like MADCOMs and to take responsibility for their information consumption and data privacy.

MADCOMs' Three Scenarios

Scenario One—A World Gone MADCOM:

Global Information Warfare. During the next decade, a wide range of actors develops and deploys highly manipulative MADCOMs, with few restrictions on their use. Governments are slow to respond to the threat, due to ignorance or concerns about restricting free speech. Nations “weaponize” narratives, using MADCOMs to exacerbate social discord, undermine faith in other hostile governments, and eliminate the reliability of traditional journalism.²⁸ Savvy dictators and authoritarian regimes use unattributed MADCOMs to wage information warfare, delivering personalized propaganda to individuals in foreign countries and to their own citizens. MADCOM-driven noise drowns out signals used in intelligence collection and social media analytics. However, MADCOMs impersonating humans open new routes for espionage and theft. MADCOMs are used to create fake events and to subtly manipulate real ones for advantage. Perceptions of reality can easily be changed to suit the manipulator’s interests.

Scenario Two— Muddling Through:

Measures and Countermeasures. MADCOMs begin to run wild online over the next ten years, and governments make some progress in developing policies applicable to the rapidly changing ICT marketplace. The US government tries to take action to stop the distribution of blatantly fake information, but courts steer away from a role as arbiters of truth, and the law is difficult to enforce. Technology companies fill the gap—partially out of a sense of civic duty, but mostly because they fear government regulation. Social media companies introduce strong MADCOM-detection and filtering tools, and computational-propaganda bot networks are shut down. Browser companies introduce AI tools for detecting machine-driven user accounts and for flagging information of questionable quality. The technology industry forms self-regulatory bodies to create and enforce standards for identity, bot activity, and content, but also to help smaller companies enforce these regulations. Innovations to media business models diminish the profitability of viral and clickbait sites. Social-media companies form an

equivalent to *Consumer Reports* for news and information, which becomes the gold standard for all journalistic integrity. The erosion of truth is not as rapid as in scenario one, but in this world conspiracies abound, faith in institutions plummets, expertise is devalued, and reality—if not fully pliable—turns bendy.

Scenario Three—Lockdown: the Cognitive Security State.

In response to threats posed by MADCOMs, computational propaganda, weaponized narratives, and other rampant disinformation, many nations impose stringent regulations on online communications and information during the next decade. The global community creates a new internet 2.0 that features much stronger security protocols, including required, verified, state-issued identities for access. Unattributed MADCOM activities are prohibited by law and attributed MADCOMs are heavily regulated. Internet 1.0 still exists, but it is seen as an unsecure Wild West—full of malware, disinformation, and predation. The global community executes a treaty on information security that covers both the technological aspects of cybersecurity and the cognitive aspects of information security. This treaty—combined with the verified identity requirement for internet 2.0—is seen as a massive loss for global internet freedom. China celebrates internet 2.0 and completely severs access to the anonymous internet 1.0 for its citizens, as do other authoritarian and totalitarian regimes. The United States follows Europe and adopts strong restrictions on third-party data transfers and requirements for clear data-use disclosures in terms of service, in an attempt to limit data collection that could be used for manipulative purposes. Corporations rebel and nearly defeat the legislation, but they back down due to public pressure and the threat of more stringent government actions. A public-private partnership develops guidelines for regulating MADCOMs and creates open-source protocols for personal data management and time-bound permissions for data use. Nevertheless, corporations continually lobby and pressure politicians to loosen restrictions on “modern marketing and advertising technologies.”



CHAPTER 4

CLIMATE CHANGE: UNSOLVABLE WITHOUT UNPRECEDENTED COOPERATION

Demand for coal—the dirtiest fossil fuel—has grown in recent years despite the phenomenal explosion in technologies for advanced renewables. Energy demand has expanded even faster than energy technologies—particularly in China—outpacing the ability for renewables or even a cleaner fuel like natural gas to keep up. Coal is accessible and cheap, and developing countries—unlike rich nations—are unlikely to wean themselves from it in the next few decades despite efforts to substitute cleaner fuels. In British Petroleum company’s (BP’s) *Evolving Transition* scenario—which assumes continuing improvements—growth in coal “slows sharply relative to the past,” but India and other emerging countries consume more as energy demands increase.³³ BP admits that even while progress is made in cutting carbon emissions, this “falls well short of the sharp drop in carbon emissions thought necessary to achieve the Paris climate goals.” It concludes that “we need a far more decisive break

from the past.”³⁴ Is that possible without causing major political and economic disruptions?

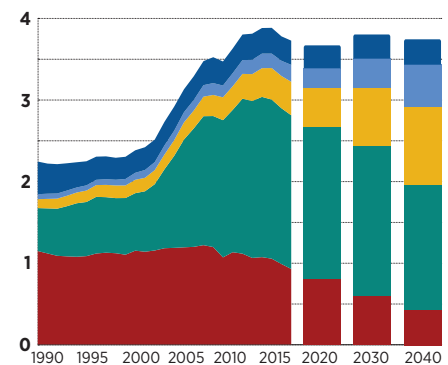
Recent research shows, however, that the world does not have much time.³⁵ If the Paris Agreement targets are to be met, there may be very few years left for policy makers to start cutting emissions.

By 2035, the point of no return could be crossed—after which stopping the Earth’s temperature from rising by 2 degrees Celsius (3.6 degrees Fahrenheit) will be extremely difficult, if not impossible, kicking off a dangerous medley of global disasters.³⁶ Instead of 14 percent of the world’s population being exposed to severe heat at least once every five years, 37 percent of the global population will be subject to such exposure. (See chart below on p. 51 that shows what difference a half of a degree makes.) To avoid the point of no return, the world needs to boost renewables by 2 percent *per year*. During the past twenty years, the world’s reliance on renewables has grown by 3.6 percent *overall*, which shows the enormity of the task. In comparison, BP’s *Evolving Transition* scenario projects a five-fold increase in the use of renewable over twenty-two years, providing only 14 percent of primary energy. The biggest challenge will be enabling developing countries to switch from coal to cleaner fuels without undermining their economic development. In this increasingly nationalist world, the West’s helping on a

Coal Consumption by region

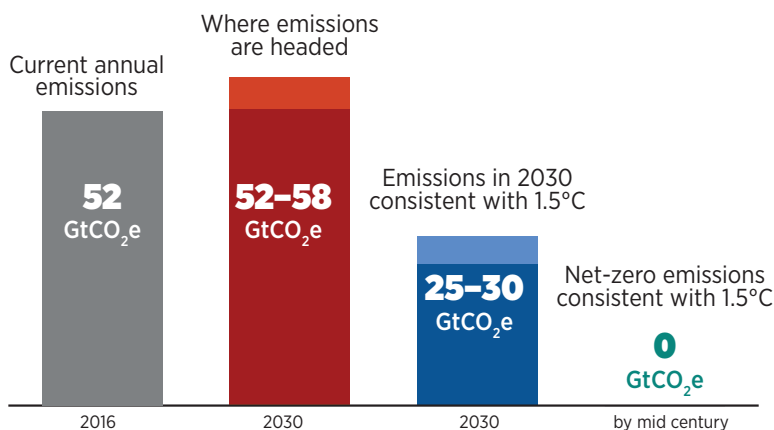


Billion toe



SOURCE: BP Energy Outlook 2018.

The World Is Not on Track to Limit Temperature Rise to 1.5 C



SOURCE: World Resources Institute, October 2018.

scale not seen since the Marshall Plan appears unrealistic. Only a series of catastrophic climate-related events would motivate such an investment. Although extreme weather and climate events have become more common and scientists now believe will become increasingly likely, a more plausible trajectory will resemble a slow-boiling frog, not waking up until the dangers are too late.

The Challenges of Going Green

The Atlantic Council recently undertook a quantitative analysis of three scenarios—compared to a base case examining the trajectory of CO₂ emissions and the use of renewables for global energy—that demonstrated the extent of measures needed to create a cleaner world.³⁷

The base-case scenario assumes a continuation of moderate economic growth: things remain broadly in line with recent trends politically and economically, with no major disruptive changes in the political or technological realms and no radical departures in terms of sustainable development and climate-related policies. Renewables continue to advance but no real effort is made to make a decisive shift. Consumption of oil, gas, and coal continues to grow in absolute terms, while declining relative to the total. Additional efficiency gains are achieved in all areas of energy demand, roughly corresponding to those the world has seen recently or which can be assumed as part of normal product development.

In the ***Going Green without Nuclear*** scenario, we considered the implications of the US, EU, and China imposing a CO₂ tax of \$50 per metric ton of CO₂ on themselves. Other countries try to shift to lower CO₂ emissions in the electrical power sector. This scenario results in much higher electrification, and within the electrical power sector, the use of more renewables. Significantly higher efficiency gains are required in the *Go Green* scenario than in the base-case scenario:

- Households and services in the *Going Green* scenario show a 2.2 percent efficiency increase per year, compared to 1.6 percent in base case.
- Energy demand from industry, other energy sectors, combined heat and power (CHP) and nonenergy sectors assumed a 2.6 percent efficiency increase per year, compared to 1.9 percent.
- Energy efficiency gains in transport in the *Going Green* scenario are increased by 2.8 percent per year, compared to 0.5 percent in the base case.
- Aviation bunkers and marine bunkers are the same as in base case, with marine efficiency increases of 1 percent per year, and aviation efficiency increases of 2.4 percent per year. However, energy demand still grows because of increasing passenger-kilometers and tonne-kms (both freight aviation and marine transport).

Individual countries see significant increases in renewables even in the mean projections, such as China and the United States.

The solid green lines represent the mean forecast while the upper staccato dotted lines and lower broken lines represent the upper and lower envelope of the forecasts.

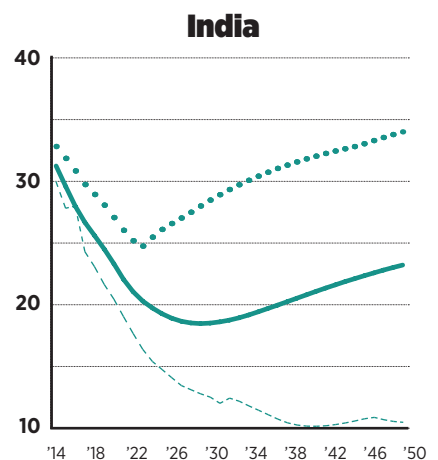
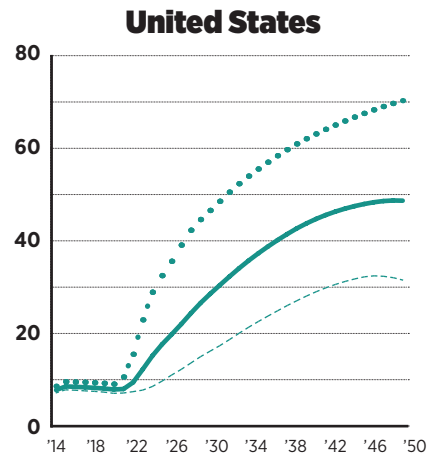
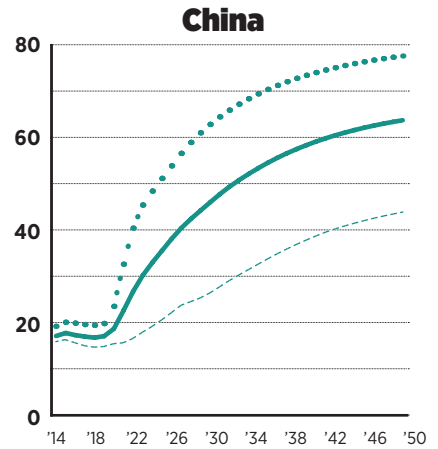
The results are not nearly as promising in the case of India, which is seeing its energy demand climbing, but the percentage of renewables in its total energy consumption dips despite its commitment in this scenario to more renewables, underlining the difficulty of squaring the circle between rapid development and a cleaner future.

A third scenario, ***Going Green with Nuclear***, also assumes a decisive change of policy and practice. Members of the EU27 and China shift their strategies as political will for green energy gains momentum. Political, economic, and business incentives converge. The United States is behind on this effort, and initially an outlier, but from 2020 on it joins the drive for clean energy after the next presidential election results in a change of incumbent. Under this scenario, US policy makers rethink the role of nuclear energy. Memories of recent nuclear incidents fade; the fear of the consequences of global warming yields a new pragmatism about the possibilities of nuclear energy, along with support for the funds to match it.

The United States begins a new era of nuclear power; in the rest of the world, new nuclear capacity is added and many countries consider the option. Germany stops its phase-out but does not add any new plants. Japan gradually restarts twenty-seven of its reactors. This scenario assumes that a number of these countries embark on this effort and each has nuclear power come online in eleven to twenty years from the time of its “go-green decision” that is equivalent to 10 percent of its total power needs. Smaller projects can come online faster than larger ones. Overall, this only impacts electricity production late in the game, while electricity is already shifting to renewables. In that sense, the shift to nuclear energy reduces the new commissioning of renewables.

Percentage renewables of total energy consumption in China, USA, and India

- Without Nuclear Upper Bound
- Without Nuclear (Mean Forecast)
- - - - Without Nuclear Lower Bound



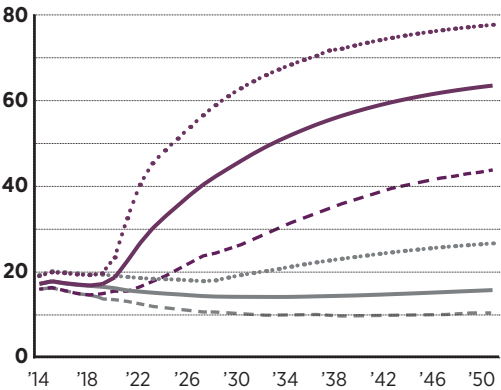
SOURCE: Atlantic Council.

Percentage renewables of total energy consumption in China and US

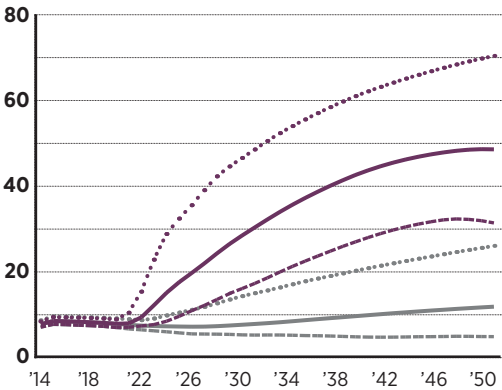
- Go Green With Nuclear (Mean)
- Go Green With Nuclear Upper Bound
- Go Green With Nuclear Lower Bound
- Base Case (Mean)
- Base Case Upper Bound
- Base Case Lower Bound

Taking a decision early and imposing CO2 tax pays greater dividends in boosting renewables and lowering emissions than pursuing the nuclear energy option. Purple line refers to Going Green with nuclear; gray ones to the Base Case where go-green policies are not implemented.

China



United States

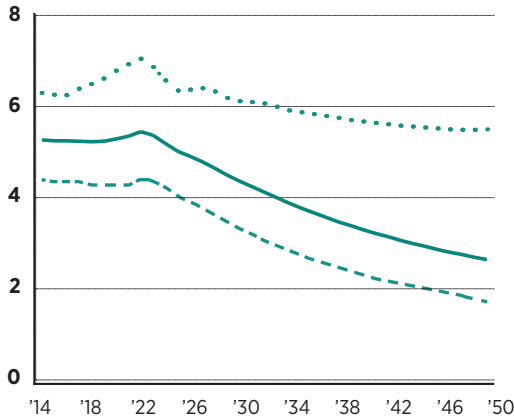


SOURCE: Atlantic Council.

US CO₂ Under “Go Green” Without Nuclear

- Without Nuclear (Mean)
- Without Nuclear Upper Bound
- Without Nuclear Lower Bound

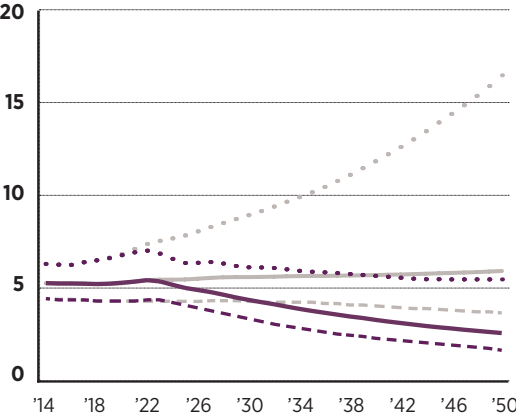
CO₂ Emissions from Fossil Fuels in tCO₂ per year



US CO₂ Under “Go Green” With Nuclear

- Go Green With Nuclear (vs Base Case)
- Go Green With Nuclear Upper Bound
- Go Green With Nuclear Lower Bound
- Base Case (Mean)
- Base Case Upper Bound
- Base Case Lower Bound

CO₂ Emissions from Fossil Fuels in tCO₂ per year



SOURCE: Atlantic Council.

Half A Degree of Warming Makes A Big Difference

| | 1.5 °C | 2 °C | 2 °C |
|--|--------------------------------------|-------------------------------------|------------------------------|
| EXTREME HEAT Global population exposed to severe heat at least once every five years | 14% | 37% | 2.6x WORSE |
| SEA-ICE-FREE ARCTIC Number of ice-free summers | AT LEAST 1 EVERY 100 YEARS | AT LEAST 1 EVERY 10 YEARS | 10x WORSE |
| SEA LEVEL RISE Amount of sea level rise by 2100 | 0.40 METERS | 0.46 METERS | 0.06m MORE |
| SPECIES LOSS VERTEBRATES Vertebrates that lose at least half of their range | 4% | 8% | 2x WORSE |
| SPECIES LOSS PLANTS Plants that lose at least half of their range | 8% | 16% | 2x WORSE |
| SPECIES LOSS INSECTS Insects that lose at least half of their range | 6% | 18% | 3x WORSE |
| ECOSYSTEMS Amount of Earth's land area where ecosystems will shift to a new biome | 7% | 13% | 1.86x WORSE |
| PERMAFROST Amount of Arctic permafrost that will thaw | 4.8 MILLION KM2 | 6.6 MILLION KM2 | 38% WORSE |
| CROP YIELDS Reduction in maize harvests in tropics | 3% | 7% | 2.3x WORSE |
| CORAL REEFS Further decline in coral reefs | 70-90% | 99% | UP TO 29% WORSE |
| FISHERIES Decline in marine fisheries | 1.5 MILLION TONNES | 3 MILLION TONNES | 2x WORSE |

SOURCE: World Resources Institute, October 2018.

CHAPTER 5

THE WORLD IN 2035: THREE NEW SCENARIOS

In the absence of a “new normal” emerging to replace the Western-led liberal order, new possible alternatives must be considered. Scenarios serve multiple functions. They can be predictive, but more often they help clarify the direction of current trends, the ways they could morph, in this case, into a new global order. By helping leaders anticipate possible futures, scenarios can help decision makers take action to avoid the worst outcomes. An endless number of possible variations could be anticipated. The three scenarios described in this report—***A World Restored***, ***Descent into Chaos***, and ***A New Bipolarity***—are written to show the stark differences among alternative futures, all of which are possible consequences of current trends.

It is emblematic of the transitional era that we inhabit that the future could be so different from what has seemed so familiar—the Western liberal order—and so “right” and “natural.” Historians remind us, though, that for much of history the “West” was not as powerful as the “East” and “unipolar” and liberal “moments” have been just that—very fleeting when viewed across centuries. The relative decline of the West as others—especially China—resurge does not necessarily mean the end of the West or Western values. Nonetheless, decision makers need to think about possible futures that are radically different from one another. Even in the *World Restored* or *New Bipolarity* scenarios, enough has altered that they would have a new zeitgeist from the one most of us grew up with in the triumphant post-Cold War West. Only by recognizing that the world has entered a post-Western phase can we hope for a Western revival that reconciles the West with a rising East and South with radically different perspectives.

SCENARIO A

A World Restored

A World Restored is a partial misnomer. It only comes about through and because of chaos. The United States sought containment of China, but that became too costly and many people in the US feared that such a strategy would only result in a war. Former Chinese President Xi's gambit of forcing innovation while suppressing freedoms finally hit a brick wall. In the United States, the dream of recreating a unipolar world is forever lost. Chinese leaders have to accept the fact that the so-called "Chinese model" of a heavy state-led development can only get a country so far.³⁸ Five-to-ten years ago, it would have been hard to predict that peace would break out and globalization would survive the growing nationalism across the world.

Middle Classes Opting for Prosperity

Washington's first instinct is to stifle Chinese innovation. Restrictions on Chinese access to US markets and know-how was increasingly hardened. By the early 2020s, US markets become inaccessible to Chinese goods and investment while China reciprocates, forcing US companies to depart. The Europeans are divided. West European firms feel the same way that US companies do about the Chinese ripping off their intellectual property; they pressure their governments to tighten up access for Chinese investments. In Eastern Europe, it is a different story. Still seeking to bring living standards up to Western levels, most countries welcome Chinese investments, particularly as those from elsewhere are declining.

Eventually the world suffers a deep recession because of the standstill in trade. US debt soars as tax revenues are hit. Some US policy makers talk about cutting back entitlements, which angers seniors. Most European countries faced even stiffer fiscal challenges. A new peace movement takes off, calling for an end of the arms race. At this point, Western leaders fear that if they offered an olive branch, China would not reciprocate with concessions.

China's burgeoning middle class is in the same situation as its Western counterparts. Aging and growing more risk-averse and tired of the social restrictions, Chinese citizens begin making their displeasure known. Fearing that the Communist Party could be dethroned, the elites ease out President Xi and resurrect the memory of former Chinese leader Deng Xiaoping, who had counseled caution in confronting the West.

With new leaders on all sides, the opportunity arises for East-West relations to be reset. This occurs slowly, however; at times it looks like both sides are falling back into confrontation. While recommitting itself to multilateralism, the US starts by strengthening ties with its traditional allies in Europe and Asia. The new president returns to Obama's idea of negotiating updated TPP and TTIP agreements to bolster US leadership and turn a page on Trump's "America-First" stance.

Meanwhile, China uses its ties with the developing world to press for a global trade round. It knows it might have to give on IP, but it wants more access to Western markets, including relaxation of Committee on Foreign Investment in the United States (CFIUS) and other restrictions. Developing countries press for better treatment of their young citizens being educated and starting to work in the US, Europe, and China. Similarly, they want the advanced economies to incentivize their return to their home countries in order to ease the brain drain.

Western governments understand that inequality is a sore point with middle classes, who feel they are losing too much ground to the rich and worry that their children's futures are endangered by it. Raising taxes on the wealthy will not work absent an international agreement ensuring that the rich cannot simply relocate, thereby escaping taxation. Pressured by the US, Europe, and Japan, the G20 creates a comprehensive agreement to combat international tax evasion.

Growth Returning, Climate Taking Toll

A renewed commitment to global trade ensures the return of relatively high global growth rates. The continuous exchange among the global innovation hubs prevents the balkanization of online and communication standards and creates significant breakthroughs in fields such as AI, genetics, and robotics, which in turn spurs productivity growth in the developed world.

The Party Survives

In China, a new social contract emerges, one that enhances welfare programs and creates more opportunities for the middle class. Although Xi is history, his anticorruption campaign gathers new steam and Chinese leaders seek to bolster inclusive growth.

The US under new leadership rejoins the international community in fighting climate change. Nonetheless, the efforts to lower emissions are not making the hoped-for difference. Coal remains king in the developing world, where economic growth is prized over environmental preservation. The United States and the rest of the West seek to increase assistance to the developing world so China is not its only patron, but much more assistance aimed at boosting renewable energy sources is needed to incentivize clean growth.

From Nationalism to Global Cooperation

With climate change accelerating and becoming an obstacle to growth, the international agenda begins to shift. Some countries initially flirted with geoengineering to solve their own climate challenges, but those efforts often led to unintended consequences of a negative sort for themselves and their neighbors. Over time, just as countries had to band together to fight inequality, rapid climate change leads them to emphasize cooperation over competition. All this new cooperation forms the basis for more extensive cooperation on peace-building. The leading military powers (US, Russia, and China) agree on a global defense spending freeze and successfully negotiate new international conventions on the ban/limitation of space, biological, and cyber weapons.

Conflict does not completely go away, however: the Middle East, Africa, and Central Asia continue to experience civil wars and insurgencies. The major powers seek to dampen those conflicts instead of turning them into proxy wars.

A Fragile Peace

Peace has broken out during other periods of history, usually after a crisis or scare over the consequences of continued warring. Corruption, inequality, and climate change could trigger greater competition among countries. The middle classes, however, have a taste of the economic disarray that can happen in a dog-eat-dog world and have turned away. Political reform inside China and the West is a prerequisite for change to peaceful cooperation. Climate change is such a daunting challenge that for the first time it is taking a major economic toll on all the major powers, bolstering the incentives for cooperation. Good things can come from bad ones, however. In this case, the physical devastation resulting from climate change has a silver lining.

SCENARIO A

A WORLD RESTORED

KEY DRIVERS BEHIND SCENARIO A

Driven by a global recession, domestic upheavals—and in the case of the US, Japan, and Europe, the fear of Chinese dominance—the G20 countries commit themselves to reform global trade and establish a new social contract for the middle class.

TRIGGERS

China overtakes the US economically in the 2020s; trade conflicts slow global growth rates; massive protests by the middle class in both China and the West; Europe, the US, and Japan join forces to push global reforms.

Categories

Trade and Immigration: Spurred by the rising threat of China and the failed attempt of unilateral containment, the US re-commits itself to strategic multilateralism. To enforce Western standards and rules on trade, Washington successfully negotiates new TPP & TTIP agreements with its European and East-Asian allies. China and India, which feel excluded, push for another round of WTO negotiations. New WTO rules are finalized in 2030, setting new standards for the protection of intellectual property, agricultural trade and subsidies, government procurement, and online services. Pressured by the US, Europe, and Japan, the G20 signs a comprehensive agreement to combat international tax evasion. By 2030, with aging accelerating in developed nations, most of these countries adopt generous immigration incentives for highly skilled laborers from the Global South. In 2035 the United States, Europe, Japan, and Russia agree on a common visa-free zone in the Northern Hemisphere.

Innovation and Growth: The escalating trade war between China and the US during the late 2010s led to a recession and domestic upheavals in both countries. Neither side was willing to fully escalate the conflict into a potential war. Both Beijing and Washington realized that they needed to reform the global trade system to keep their own middle class at bay. Consequently, both sides also reform their welfare and taxation systems. Increased taxation on corporate profits and high-net-income individuals raise sufficient revenues to invest in healthcare and welfare programs as well as education and public employment initiatives.

A renewed commitment to global trade ensures the return of relatively high global growth rates. The continued exchange among the global innovation hubs prevents the balkanization of online and communication standards and creates significant breakthroughs in fields such as AI, genetics, and robotics, which in turn spurs productivity growth in the developed world.

Driven by the global competition for markets and resources, as well as by a shared desire for stability in the Southern Hemisphere, the EU, North America, and Japan match China's investments (via BRI) in developing countries, investing heavily in infrastructure projects, education, and private-sector initiatives.

Climate and Energy: The US—beset by an increasing number of extreme weather events, such as hurricanes—re-joins the Paris Climate Agreement in 2022. In consecutive years, the G20 agrees on a joint investment program into renewable energy and common efficiency standards. G20 members also pledge to share new innovations with each other and the developing world in order to battle the worsening effects of climate change. The rising share of renewable power consumption and drastically increased energy efficiency in the West keep the global price/demand of fossil fuels relatively low.

Domestic Governance: The rising global middle class initiates a new era of responsive and progressive governments worldwide. In the mid-2020s the United States, most European states, China, and Russia are governed by effective leaders dedicated to multilateralism. In the developed world and China, a new social contract emerges that enhances welfare programs, increases taxation on corporations and high-net-income individuals, and guarantees inclusive growth. This largely repairs the mistrust in globalization and inspires similar reforms in the developing world. With democracy on the rise again, Turkey, Venezuela, Saudi Arabia, and Iran gradually introduce liberalizing reforms.

Global Cooperation: With a new generation of leaders in power, the dawn of a new era of global cooperation begins in the early 2020s. Growing discontent over the unequal rewards of globalization and accelerating climate change forces the major powers to reform the global trade and taxation system. Successful multilateral agreements and G20 summits set the stage for a major reform of the WTO rules.

The leading military powers (US, Russia, China) agree on a global defense spending freeze and successfully negotiate new international conventions on the ban/limitation of space, biological, and cyber weapons.

War and Violence: Interstate violence and terrorism continue to challenge many countries—especially in some parts of the Middle East-North Africa (MENA) region, Central Africa, and Southeast Asia—but major wars and an arms race between the superpowers are avoided. Although many developing countries gradually close the gap to the global frontrunners, some fall further behind. The improved relationships among the P5 nations, however, allows for the effective use of United Nations Security Council (UNSC) mechanisms in most cases of severe human rights violations.³⁹

Regions

Europe: Faced with domestic discontent over inequality and the fear of falling behind, China and the US engage in a great power competition. EU member states gradually cede foreign, security, and development competencies to the EU Commission and Parliament. European leaders also agree on the creation of a European fiscal union and common welfare and tax standards. This guarantees a certain balance in the monetary union. After bringing illegal immigration under control, Europe introduces a well-managed scheme to attract highly skilled labor. As the EU manages to address many of its most crucial problems, anti-Union populism declines.

Brussels consequently expands into the western Balkans and signs special relationship agreements with Ukraine and Turkey. After years of angry isolationism, the British people hold another referendum on EU membership in 2030, resulting in an overwhelming victory for the return camp.

North America: After a change in leadership, the US introduces major economic and social reforms of its welfare and healthcare sectors. Increased taxation finances more generous welfare programs. Washington also moves away from hostile unilateralism and begins to cooperate more closely with Canada, Mexico, and other partners on issues like trade and immigration.

Eurasia: After Russian President Vladimir Putin leaves office in 2024, a moderate pro-Western reformer—supported both by Russia’s business elites and the urban middle class—assumes office and begins to ease tensions with his Western counterparts. Driven by severe economic pressures, a declining workforce, and shrinking revenues from oil exports, Russia moves in the direction of the EU and NATO and solves its conflict with Ukraine.

Asia-Pacific: The Sino-American trade war undermines both governments. Declining growth rates force President Xi into concessions with the West. The US, itself worried about China’s rise and a potential military conflict, welcomes Beijing with open arms. Both sides push for new global rules on trade and investment.

Japan and South Korea, faced with aging workforces and low growth rates, open their immigration systems and seek closer cooperation with China and the United States. The US, Japan, China, and South Korea work closely together in maintaining free trade in the region—after several years of negotiations, the United States rejoins TPP in 2022. Tensions in the South China Sea cool down. By 2026, all involved parties have signed a demilitarization agreement. North Korea, trying to emulate the Chinese model, gradually opens its borders to trade and investments from the South and agrees to a complete denuclearization agreement in 2030.

South Asia: While the US and China are occupied in a bilateral trade war, India introduces far-reaching political, economic, and legal reforms. The Indian economy profits immensely from high growth rates and the global innovation boom. Increasing trade with the US, Europe, and Japan enable New Delhi to expand its middle class and assume a more active role in the region and on the world stage. Although tensions with Pakistan remain, the growing power discrepancy prevents any major conflict.

Middle East: Saudi Arabia continues its reform path, successfully diversifying its economy, and manifesting its role as a regional power. The P5+1 countries agree on a successor agreement to the Joint Comprehensive Plan of Action (JCPOA) in 2025, preventing a nuclear-armed Iran. Many parts of the region remain unstable and haunted by terrorism, but the cooperative zeitgeist prevents major escalations. After years of internal conflicts, both Iraq and Syria turn to a US-EU-Russia-China coalition for rebuilding and increased stability. The lowering of tensions among the big powers facilitates the joint action.

Africa: Most African nations prosper due to foreign investments, increased trade, and the influx of technology from developed countries. The US, Europe, and Japan massively increase their in-country spending programs to compete with China and guarantee some form of stability. Birth rates decline faster than anticipated in the first half of the 2020s, preventing an unsustainable population explosion. Growth rates remain high, and rising education levels, growing number of women in the workforce and increased urbanization prevent further population surges. Although some countries remain on the brink of failure, the African Union (AU)—in cooperation with the UN, the West, China, and India—proves to be an effective stabilizer.

South and Central America: After several years of political turmoil, a new anticorruption candidate wins the Brazilian presidential election in 2022. The new president effectively reforms the bureaucracy and addresses the nation's rampant inequality. Several years of inclusive economic growth and democratic reforms enable Brazil to play an upgraded role in the region and to successfully establish itself as a partner for both Beijing and Washington. In the absence of major conflicts, the entire region profits from the positive global environment.

SCENARIO B

Descent into Chaos

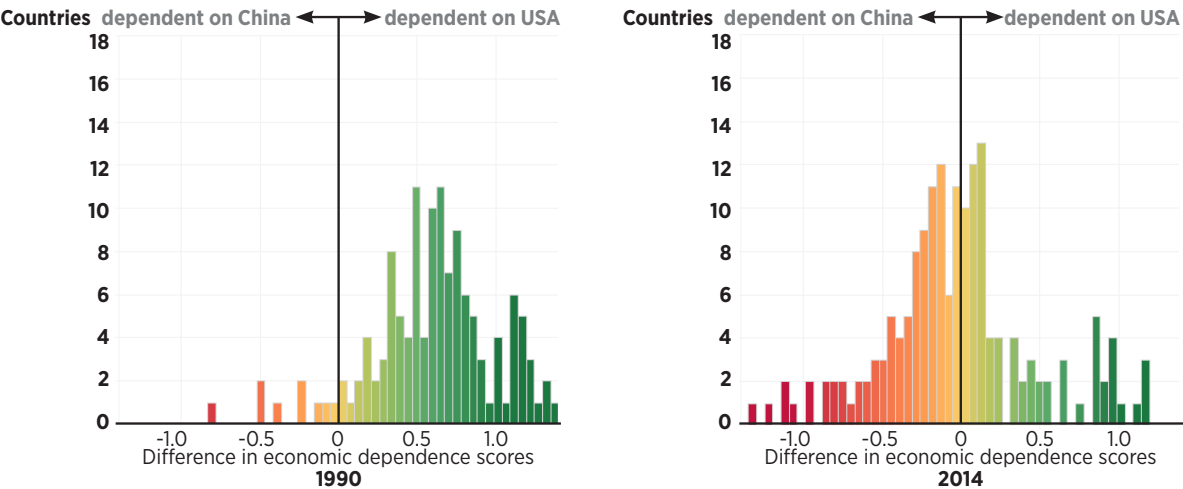
Ties between China and the United States have been strained. Rifts have also developed between the US and Europe, and cooperation across all issues has grown more difficult. In the midst of these growing great power tensions, China suffers an economic crisis that spreads, putting the world economy at risk.

China’s Economic Crisis Derails Global South

China’s financial crisis in the early 2020s has huge repercussions that linger long afterwards. The financial crisis started in the banking sector. A couple commercial banks failed, and millions of middle-class Chinese lost their savings. In earlier decades, the government could have intervened, but the losses were staggering, and Chinese growth has not rebounded. To placate public opinion, the Communist Party is forced to establish more generous social welfare programs, which proves costly. The government’s ambition to rival the United States or Europe in high-technology manufacturing by 2025 does not materialize, partly because of the trade and investment barriers erected against China by the US and Europe. Chinese students and young workers are increasingly barred from US and European universities and forbidden to work in Western high-tech firms.

China’s financial meltdown is felt by its trading partners in Asia, Latin America, and Africa. Unlike with the 2008 financial crisis, which had its biggest impact in Western economies, this economic tsunami hits the developing world.

Number of Countries Dependent on China or USA, 1990-2014



SOURCE: Pardee Center for International Futures, “Understanding and Forecasting Geopolitical Risk and Benefits,” May 2017.

International Migrants, 1970-2015

| Year | Number of migrants | Migrants as a % of world's population |
|------|--------------------|---------------------------------------|
| 1970 | 84,460,125 | 2.30% |
| 1975 | 90,368,010 | 2.20% |
| 1980 | 101,983,149 | 2.30% |
| 1985 | 113,206,691 | 2.30% |
| 1990 | 152,563,212 | 2.90% |
| 1995 | 160,801,752 | 2.80% |
| 2000 | 172,703,309 | 2.80% |
| 2005 | 191,269,100 | 2.90% |
| 2010 | 221,714,243 | 3.20% |
| 2015 | 243,700,236 | 3.30% |

SOURCE: United Nations Department of Economic and Social Affairs (DESA), 2008 and 2015a.

Even though China has partially recovered from the crisis, most developing world countries have not succeeded in reclaiming their former growth levels. Many nations introduced capital controls at the height of the crisis and still maintain them. The global middle class has been hurt—all their dreams have gone up in smoke. Even more than before, many are seeking to leave and resettle in the US, Europe, or China.

Great Power Rivalry Worsens

Rising tensions among the major powers have accelerated the already existing trend toward regional trading and investment blocs. Even before the Chinese meltdown, there were strict regulations on the export and import of high-tech goods by all the major powers, including the US, Europe, China, and India. Against the odds, China has become an innovation hub, but the market for its goods is largely limited to the low-growth developing world, which does not provide it with a rich market.

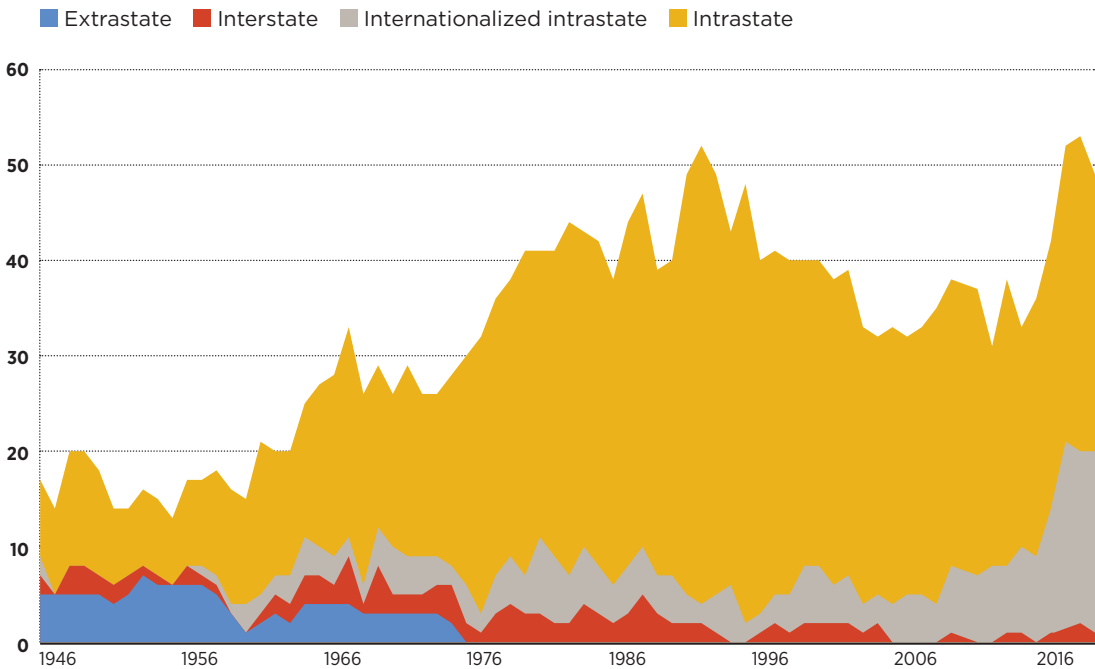
With competing technologies and communications standards among the major blocs, high tech is strictly regulated everywhere. US technology companies, which formerly sought minimalist contact with governments, are now under their thumb and are competing for national security contracts.

Climate Change Finally Erupts

As if an unexpected financial crisis in China is not enough, the developing world has been hit hard by climate change. The super-hot temperatures in Africa have led to even bigger shortfalls in agricultural production. The

world’s big food baskets used to falter just once or twice a decade. They now fail more frequently, causing food prices to increase. The panic caused by spiraling food prices inevitably leads to riots and governments being toppled. In years past, members of the global middle class could migrate to Europe, but even they cannot flee because of the EU’s military enforcement over all its borders. Instead, more destabilizing movements develop within countries and regions—Africa, the Middle East, South Asia, and Central America are the hardest hit. All these regions have been poorly governed and suffer from insufficient growth to deal with their large populations; some are situated in conflict-prone areas. Elsewhere, climate change is having an impact, further undermining the potential for good governance. New York City, Boston, and Miami have suffered massive, crippling flooding during consecutive years from storm surges during hurricanes, which have required expensive remedial measures. China’s coastal cities also have seen more severe flooding, causing widespread damage.

Number of State-based Armed Conflicts



SOURCE: Uppsala Conflict Data Program.

Please note: Extrastate conflict is between a state (member of the international system) and a political entity which does not come in the form of a recognized state.

Great Powers Unite In Isolation

Advanced technologies—drones, robots, and satellites—are used to track and try to defuse terrorists or insurgents who threaten to bring the chaos into the developed world. Terrorism erupts in Pakistan, Bangladesh, and Afghanistan, making those countries ungovernable, with the violence eventually spiraling over to India. India manages to get help from the US, Europe, and Japan on better surveillance and counterinsurgency prevention, but a couple times the international community worried that India would invade Pakistan, triggering a nuclear confrontation. Beijing can provide little help in stabilizing the region. Its former plans for the large-scale Belt-and-Road Initiative were upended by its financial crisis, which caused it to look inward and cut down massively its foreign assistance.

Owing to the growing terrorist threat, the US has been withdrawing from the Middle East for some time—triggering renewed Sunni-Shia rivalry and nuclear proliferation. Iran has secretly been developing nuclear weapons and, in recent years, Saudi Arabia has followed, relying on Pakistani help. Riyadh, with Jerusalem's help, is now preparing for a showdown with Tehran. Recognizing their mistake of ignoring the mounting problem, the United States and Europe have stepped up diplomatic efforts to stop the conflict. Washington is secretly helping Israel and Saudi Arabia develop plans to make preemptive strikes against Iran in the hope of not having to intervene. A vicious cycle of authoritarian rule, revolution, conflict, and chaos haunts large parts of the world; the cycle can only be stopped by suppression and more authoritarian rule.

Faced with growing instability, all the powers, including the United States and Europe, have no qualms about dealing with dictators as long as such leaders appear to offer the best chance of stabilizing their country and region. The basis for cooperation is not so deep that it will lead to any breakthroughs on trade or climate change or reform of multilateral institutions. All the major powers experience growing populism, nativism, and jingoism—making it hard for any government to cooperate with another except where their interests directly overlap.

Is there any way for the descent to stop? No leader of any of the great powers believes that he or she has the means to stop it. Publics are only interested in preserving the status quo and do not care about sacrificing for a better future. Middle classes in the developing world have tasted what it is like to have a better life. They are in a revolutionary mood, adding to the chaos, but they are helpless to improve their situation without champions. Global economic growth is virtually at a standstill—making it hard to be look beyond one's own situation.

SCENARIO B

DESCENT INTO CHAOS

KEY DRIVERS BEHIND SCENARIO B

The world is divided into regional trading blocs, with competing technological and communication standards; economic growth slows. Instability intensifies in large parts of the Global South. The developed world seals itself off from these troubles and supports strongmen to guarantee some sort of stability in the region.

TRIGGERS

Conflicts in the Middle East and Central America create massive influxes of immigrants to Europe and the United States; Saudi Arabia and Iran intensify proxy war; the Western alliance tries to settle the conflicts but fails; the rising price of oil increases Russia's role in the world; the major powers agree on prioritizing stability in crisis regions; they support local strongmen and close their borders to refugees.

Categories

Trade and Immigration: Trade disputes escalate, creating a compartmentalized economic world order separated into several large trading blocs. The exchange of knowledge, capita, data, and even goods among China, North America, Europe, India, Japan, and the rest of the world has severely declined. Academic and educational exchange is severely diminished. As the importance of domestic innovation and technology development is growing and unemployment is rising, the trading blocs are competing for highly skilled immigrants, investments, and natural resources. The United States, Japan, and Europe adopt highly competitive skill-based immigration schemes to attract talent from the South while closing their borders to other forms of immigration.

Innovation and Growth: As trade is significantly reduced, economic growth rates stagnate in most regions and are negative in some. Export-oriented nations and developing countries are especially hard hit by trade barriers. The introduction of capital controls, mandatory and conflicting privacy regimes, greater taxation on digital products, and strict regulations on the exchange of data and knowledge also curtail innovation. The internet is increasingly balkanized as competing 5G regimes lead to a breakdown in global technological practices. While the US and China remain innovation hubs, Europe, Japan, and others depend on knowledge imports. Economic growth is distributed very unevenly around the globe. Developing countries face an enormously uneven distribution of technological

innovation. While a small elite enjoys Western standards of living, large parts of the developing world's population remain excluded from global innovation and the possibility of upward mobility. As a result, inequalities within societies in education, life expectancy, income, and expectations increase.

Climate and Energy: While the major powers are focused on ensuring their national security and limiting immigration flows, cooperation on soft issues like climate change takes a backseat. Most nations remain committed to the 2015 Paris Agreement to combat climate change, and the world increasingly faces the consequences of global warming. Rich nations invest in adequate infrastructure and resettlement programs; poor nations frequently suffer from droughts and floods—fueling instability and conflict in Africa, the Middle East, and South Asia. The global oil production/price fluctuates heavily due to instability in the Middle East and other regions. Industrialized nations react by increasing their investments in renewable energy, domestic oil and gas production, and expanding their strategic reserves.

Domestic Governance: Populism, nativism, and jingoism are on the rise. Liberal sentiments are gradually replaced by “us-first” attitudes in both the developing and developed world. Although democracy does not collapse in the Western world, individual rights are increasingly trumped by collective demands.

Global Cooperation: A shared interest in stability brings the West, Russia, China and some other key players together. Although their worldviews do not converge enough to guarantee major breakthroughs within the WTO, or on issues such as climate change or UN reform, these players agree on prioritizing regional stability over personal rights and democracy promotion. Western leaders are increasingly willing to ignore human rights violations. They work with authoritarian leaders in the Middle East, Africa, and Central Asia to ensure that migrants do not have a free passage to the developed world.

War and Violence: War and violence are throwing large parts of the world into chaos. A vicious cycle of authoritarian rule, revolution, conflict, and chaos haunts large parts of the world. The West has given up on solving these problems and is now focusing on managing them in cooperation with China and Russia. Although these powers sometimes find themselves on different fronts in proxy wars, they have a general understanding on certain redlines, and they avoid escalating conflicts to an extent that would involve themselves too much.

Regions

Europe: In the wake of the economic downturn, disagreements on trade and other issues are creating serious frictions between Europe and the United States. Without major military threats against the alliance, economic competition weighs heavier than potential security concerns. US troops are largely withdrawn from Europe. European companies are increasingly dependent on automation and machine-learning technology designed in the United States and China. Although Europe is still one of the richest areas of the world, its firms are increasingly uncompetitive.

The rise of nativist and populist governments creates serious obstacles for further integration steps, but the competitive global environment keeps the Union functioning and united. Europe—dependent on foreign markets and resources—drastically improves its relationships with Russia, Iran, and Turkey and engages very actively in Africa and the MENA region.

North America: Strong opposition to immigration and support for a “restrained” foreign policy increasingly dominate in Washington. The public is no longer willing to finance nation-building abroad. The US focuses on bolstering its southern border against illicit migrants and cuts back on acceptance of refugees from the Middle East. The United States increasingly turns into a conservative status-quo power, valuing stability over idealistic adventures.

Eurasia: With the EU being occupied in the South and the US focusing on domestic issues, Russia feels secure enough to pursue a more complacent foreign policy in exchange for economic support. Western sanctions are lifted in exchange for Russian help for stabilizing the Middle East and Central Asia as well as increasing its energy production to stem the rise in oil and gas prices.

Asia-Pacific: China, Japan, and South Korea are faced with aging workforces and dependence on stable and open trade routes to import resources and export consumer goods. Together with the United States, they reach an informal agreement to ensure stability in Asia, the Middle East, and Africa. North Korea is contained and slowly opens its economy, trying to emulate the Chinese model. Beijing, meanwhile, faces slower growth rates than anticipated as its investments in the Global South fail to reap the anticipated rewards.

South-Asia: Terrorism, climate change, and insurgencies are throwing Pakistan, Bangladesh, and Afghanistan into constant chaos. India is increasingly affected by the spread of violence around and within its borders. Weakened by Islamic terrorism and Naxalite uprisings, India is dependent on limited support from the US, Europe, and Japan.

Middle East: As the United States is slowly withdrawing from the region, violence in the Middle East is boiling over, and the Sunni-Shia conflict explodes. The proxy wars in Yemen, Syria, and Iraq are worsening. After the JCPOA collapsed a couple years after the US pulled out, Iran resumed its nuclear program and according to the Mossad will develop its first nuclear capabilities in 2024. Saudi Arabia is reported to have also started a military nuclear program. As terrorism and violence is haunting the region, Israel and Saudi Arabia are preparing for a major conflict with Tehran.

Africa: Although some nations, such as Botswana, Ghana, Namibia, and South Africa, remain relatively stable and prosper, most of sub-Saharan and North Africa descend into chaos and violence. Ethnic and religious conflict is tearing apart countries such as Nigeria. Waves of refugees, followed by epidemics and starvation, are further destabilizing the continent. To guarantee some form of stability, the West and China are supporting various authoritarian regimes in the region financially and with military equipment and advisors.

South and Central America: Although some countries, like Haiti and Venezuela, are ravaged by conflict, creating waves of refugees, the continent still is better off than Africa or the Middle East due to the stabilizing role of the United States and the absence of major upheavals in Argentina, Brazil, and Mexico. Central America is an exception: poverty and violence remain deeply rooted and virtually all middle-class citizens are leaving.

SCENARIO C

A New Bipolarity

The growing US-China rivalry is at the core of the new bipolarity. There was a sharp break beginning with Trump and Xi. Previous US presidents had assumed that China could be integrated into a US-dominated international system. Starting with the Trump presidency, more and more Americans believed—especially the foreign policy elite—that US and Chinese interests are fundamentally opposed on any number of grounds from governance to economics.

The same thing was occurring in China but from a different angle. For most Chinese, the US was still more powerful, but in decline. The Chinese thought they were owed respect by others, including from the United States. After all, China saved the West after the 2008 financial crisis—and Beijing was just doing in the South China Sea and elsewhere what the US had long done, dominating its neighborhood. The Chinese increasingly bristled at the thought of the US holding China back, putting a ceiling beyond which it could not rise unless it constantly deferred to Washington.

A key question for the Trump and successor US administrations was whether the United States should make China into an outright enemy. Both the US and China had hedged for years, building up military capabilities in case the bilateral relationship turned sour. Both sides knew there would be economic costs in such a case. Most US multinationals rely on global supply chains involving a strong Chinese role. Chinese leaders aim to make their economy more domestically driven, but so far it remains vulnerable to a trade war with the United States.

Given these serious downsides, bipolarity did not seem inevitable until now. Even now, US and Chinese leaders could pull back and decide that it would be better to find a compromise, while still hedging—in effect going back to a status quo ante when Sino-US ties were fraught but not at a breaking point. But, by the 2020s, it became harder for a US president to balance the risks of conflict against the increasing business, technological, and military challenges to US primacy by Beijing. A US president that sought reconciliation would come under constant fire from domestic critics for being weak against the Chinese threat.

Equally on the Chinese side, could Xi or his successors take the risk of being seen as weak in US eyes? At the same time, the government must deliver on continuing economic growth and prosperity. The Chinese economy had become less dependent by the 2020s on US trade and investment and more confident of its own technological prowess. And Chinese leaders were confident that the Chinese public was as outraged as they were about US attempts to keep them down.

Inevitability in Defiance of the General Will

Just as before the First World War, everybody now says they do not want war—but that did not stop the conflagration from breaking out in 1914. A bipolar world that is on the road to conflict is no less unlikely now. Japan, Australia, Vietnam, and India share US concerns about an overly dominant China, pushing Washington to increase its military presence in Asia. They think that a stronger US presence will force China to respect them. At the same time, they do not want a Sino-US conflict because their economies are dependent on trade and investment with China.

Nevertheless, with more US assets patrolling near Chinese-claimed territorial waters, a naval clash was bound to happen, resulting in numerous US and Chinese casualties. A truce is called and briefly established but breaks down as the rhetoric—each condemning the actions of the other—escalates. Some Pacific countries—Japan, Vietnam, and Australia—take the US side, but others straddle the fence, still worried about the economic fallout from angering Beijing. The US creates a collective Pacific Treaty Organization with the three who are signatories with Washington. Other Asians—South Korea, the Philippines, Malaysia, India, and Indonesia—seek observer status hoping that they can benefit from the US security umbrella even though officially nonmembers.

Threatened by this development, China and Moscow publicly sign a Reinsurance Treaty that provides that each party would support the other if it were attacked by the US or NATO. This stuns Western observers who believe that Russians were tiring of their dependence on Beijing. Nevertheless, the Russian economy profits due to massive Chinese investments into the energy and infrastructure sectors. Consequently, Moscow aggressively tries to expand its sphere of influence, flaring up several proxy conflicts in Ukraine, Georgia, and Kosovo.

NATO reacts forcefully, providing local governments with weapons and military equipment and by deploying further forces into Kosovo to stabilize the region. As pro-Russian protests in Latvia turn violent in 2024, NATO immediately deploys troops into the Baltic nation, to which Russia reacts by mobilizing its western military district. Although this standoff ultimately does not lead to war, it raises the stakes for both sides.

Europe has had the experience of a Cold War and does not want a repeat performance. Nevertheless, Russian aggression ties the Europeans closer together. Following French proposals, the EU creates a common defense fund and swiftly deployable common defense forces. The sanctions regime against Moscow is widened. Brussels starts competing with Russia in the Balkans, Ukraine, and parts of the Middle East, with Europe using its superior economic power to coerce leaders and people. Russia responds with cyberattacks, misinformation, and surrogate forces. As the role of Turkey has become more important to both NATO and Russia, both sides try to increase their influence with Istanbul.

The global confrontation and economic pressures draw India closer to the West. Although New Delhi tries to remain neutral, its dependence

on energy imports from the Gulf and access to Western markets—combined with the increasing threat of an assertive China in the Indo-Pacific—fosters closer cooperation with the United States. For its part, Pakistan ramps up its cooperation with China and Russia, further distancing Islamabad from Washington.

Iran, supported by Russia and China, develops nuclear weapons. The Saudis, mainly supported by Israel, follows suit. The Shia-Sunni wars in Syria, Iraq, Jordan, Yemen, and Lebanon are reignited and turn into proxy wars between NATO and Russia.

The End of Globalization

With East-West conflicts breaking out, globalization frays enormously with everyone paying the price in serious losses in economic growth. From time to time, US and global business leaders appeal for lowering tensions and going back to free trade, but neither group wants to seem unpatriotic, so they do not press their case too hard. With liberal and conservative media united in blaming Russia and China, minimal political dissent occurs in the West. Governments everywhere—not just Beijing and Moscow—are using Big Data to identify, track, and isolate trouble-makers in any event. With modern technology, George Orwell's 1984 vision proves easy for governments to implement. The war atmosphere provides the justification.

For some years, Chinese firms are restricted from investing in Western tech firms. All sides have slapped export controls on sensitive technology. Chinese students no longer come to the US for their STEM education. The US also discourages students from countries friendly to Russia and China. International travel is at a low ebb as Chinese tourists find it difficult to get permission to travel to the West. Those who do travel find a mixed reception in the West and vice versa.

Although Russia, China, and the United States are building up nuclear arsenals, including tactical nuclear weapons, cyber is the weapon of choice for all sides. Increasingly, other countries—not just Russia and China—close off their national borders to all kinds of information, to better protect themselves from outside attacks. By the 2020s, there are separate internets, despite their once common ancestor, and they can no longer connect. Periodically, Russia with China and US/NATO on other side test each other's defenses. No national leader has any idea what the redlines are for the other. In the 2020s, none of the three players has taken down a grid or any major infrastructure in each other's homeland, but they are preparing by taking opposing sides in various proxy wars and sending each other warnings of what they could do to the others in event of a real war.

Fear is now the dominant emotion. Everyone is just waiting for the moment when a hot war erupts. As in August 1914, no one believes that such a war can be stopped.

SCENARIO C

A NEW BIPOLARITY

KEY DRIVERS BEHIND SCENARIO C

The conflict between China and the US spirals out of control. Russia and the EU increasingly clash along their borders; Europe, Japan, and the US intensify their security cooperation and try to isolate Beijing and Moscow; China and Russia sign onto an alliance.

TRIGGERS

US-China tensions over trade intensify significantly; the population in both countries turns more hostile and jingoistic; Japan re-militarizes. Russia starts conflicts in Eastern Europe and in the Balkans; the EU reacts forcefully and poses a serious challenge to Russia; the US and its partners create a Pacific Treaty Organization; violent clashes occur in the South China Sea.

Categories

Trade and Immigration: Global trade flows have been disrupted by protectionism in China, US and EU; the resulting recession has empowered nationalistic and jingoistic forces. In this looming trade war, the West, together with Japan and South Korea, form a common front against China, leading Beijing to intensify its ties to Russia.

General immigration patterns remain largely the same; exchange programs between the West and China, however, are diminished. Chinese students have almost completely disappeared from the West and foreign expatriates face hostilities in China.

Innovation and Growth: Trade disputes between China and the West have reduced global growth rates. Diminished living standards for the middle class force governing elites on both sides of the Pacific to double down on their nativist and populist rhetoric. While both China and the US remain vital innovation hubs, there is almost no exchange between them. The internet is split apart into a Chinese realm—which covers mainland China, Russia, Pakistan, and several other countries in Eurasia and Africa—and a Western part that covers the rest of the world.

Climate and Energy: Because both sides are unwilling to make any economic concessions, the global fight against climate change is abandoned. The Western Alliance and China are individually preparing to deal with the consequences of rising temperatures. The major powers compete for fossil fuels across the globe, which in turn gives more leverage to oil-rich nations. This dynamic empowers states like Russia, Venezuela, and Iran and forces China and Europe into frequent engagements abroad.

Domestic Governance: Liberal democracy regresses worldwide. In the West, the confrontation with China is empowering jingoistic strongmen-populists who are willing to bolster loyal dictators across the globe. In China and Russia, the confrontation keeps ruling regimes popular despite economic problems.

Global Cooperation: The global governance structure is eroding. The rules-based world order has all but vanished. China expands its reach aggressively, in part to distract Beijing from its own economic troubles and also to secure foreign resources and markets. Beijing frequently clashes with Washington in international arenas and with its neighbors over territorial disputes. Russia meanwhile continues to destabilize western democracies and regain its empirical role in the territories of the former Soviet Union. Other regional powers like India, Brazil, Nigeria, and Iran try to balance between the two blocs while gaining more control over their respective regions.

War and Violence: Both sides massively increase military spending. Society itself becomes more jingoistic in most countries, several nations, most notably Germany, reintroduce conscription. Proxy wars, covert operations, cyber-attacks, and espionage are widespread. The outbreak of major conflict is likely.

Regions

Europe: Economic calamities and Russian aggression tie Europe closer together. Following French proposals, the EU creates a common defense fund and swiftly deployable common defense forces. Massive investments into renewables and energy efficiency, as well as energy diversification, are made to lessen the dependency on fossil fuel imports from Russia. The sanctions regime against Moscow is widened. Brussels competes with Russia in the Balkans, and Ukraine and parts of the Middle East. Europe uses its superior economic power to coerce leaders and people and Russia relies on hard power like cyberattacks, misinformation, and surrogate forces. As the role of Turkey becomes more important to both NATO and Russia, both sides try to increase their influence with Istanbul.

North America: Ongoing trade disputes with China create anti-Chinese sentiments amongst the population and a bipartisan consensus emerges that Beijing's rise must be contained. Wide-reaching trade barriers are introduced. Great power competition in the Pacific becomes the dominating idea in Washington and across the country. With Moscow continuing its campaign to undermine US elections and destabilize Europe, the US decides to improve its military engagement in both Eurasia and the Pacific.

Eurasia: The Russian economy profits due to massive Chinese investments into the energy and infrastructure sectors. Consequently, Moscow aggressively tries to expand its sphere of influence, flaring up to several proxy conflicts in Ukraine, Georgia and Kosovo. NATO reacts forcefully, providing local governments with weapons and military equipment and by deploying further forces into Kosovo to stabilize the region. As pro-Russian protests in Latvia turn violent in 2024, NATO immediately deploys troops into the Baltic nation. Russia reacts by mobilizing its western military district. Although this standoff ultimately does not lead to war, it raises the stakes for both sides.

Asia-Pacific: Beijing boosts its military spending and starts building a forceful blue water navy. In the South China Sea, the Chinese military vessels clash frequently with foreign ships, resulting in several casualties. Japan, South Korea, the Philippines, Vietnam, Malaysia, and Australia react by intensifying their military cooperation with the United States, creating a Pacific Treaty Organization in 2026. Threatened by this development, China and Moscow publicly sign a Reinsurance Treaty that provides that each party will support the other if it is attacked by NATO.

South-Asia: The global confrontation and economic pressures draw India closer to the West. Although New Delhi tries to remain neutral, its dependence on energy imports from the Gulf and access to Western markets, combined with the increasing threat of assertive China activities in the Indo-Pacific, foster closer cooperation with Washington. Pakistan in turn increases its cooperation with China and Russia, which moves Islamabad further away from Washington.

Middle East: Iran, supported by Russia and China, develops nuclear weapons. The Saudis, mainly supported by Israel, follow suit. Shia-Sunni wars are reignited and turn into proxy wars between Russia and NATO in Syria, Iraq, Jordan, Yemen, and Lebanon.

Africa: Climate change, the global recession, and foreign military involvements have triggered several violent conflicts in Africa; terrorism and extremism are spreading while the superpowers are battling for influence and resources.

South and Central America: The US tries to enforce the Monroe Doctrine. It launches a military intervention in Venezuela, backing a right-wing coup, but faces fierce opposition from China-backed governments in other Latin American countries.

CONCLUSION

“Deep History”—Looking Ahead by Looking Back

In view of the potential scenarios mentioned in this report we expect that our epoch of geostrategic and geotectonic shifts will linger on for many more years to come. We all need to probe the “underlying forces” of history that are obviously at work, recognizing that a historical rhythm has come to an end with the world now facing momentous challenges with climate change, the return of state-on-state conflict and an end to social cohesion with increasing levels of inequality. Without a political, intellectual and, some say, spiritual renaissance we will not be able to move together into the future.

Such a world in need of transformation has already been described by many thinkers, poets and philosophers since the end of the 19th century:

- German philosopher **Friedrich Nietzsche** (1844-1900) anticipated a coming period of nihilism and the birth of the *Last Man*, namely members of society that are tired of life, take no risks, and seek only pleasure, comfort and security. Modern societies of the future will be geared towards a condition in which there will be no more exceptional human beings, men that could be creators and legislators of new values.
- Swiss psychologist **Carl Gustav Jung** (1875-1961) devoted his entire life-work to the analysis of the epoch of Christianity now coming to an end in our time after 2000 years. Only a new “myth of meaning” that could overcome the spiritual malaise and nihilism of postmodern mass societies would reverse the decline that our civilization finds itself in today.⁴⁰

- Referring to his “law of challenge and response,” British historian **Arnold Toynbee** (1889-1975) pointed out that civilizations disintegrate when their leaders stop responding creatively, and the civilizations then sink owing to nationalism, militarism, and the tyranny of a despotic minority. Civilizations grow when they respond to challenges creatively. Toynbee believed that societies always die from suicide or murder rather than from natural causes, and nearly always from suicide.
- In his 1992 bestseller *The End of History and the Last Man*, **Francis Fukuyama** flagged that the advent of Western liberal democracy may signal the end-point of humanity's sociocultural evolution and the final form of human government. Referring back to Nietzsche's *Last Man*, Fukuyama's main concern already seems to be whether, in the coming of what he considers a capitalist and technological utopia, we will all become complacently self-absorbed and nihilistic *Last Men* or instead revert to men engaged in bloody and pointless battles.

The main characteristics of our postmodern age is the lack of a new global meta-narrative that advances beyond the benefits and disadvantages of globalization, binding developed and developing countries in a common mission towards solving the existential challenges of climate change, more and deadlier conflict and the absence of social cohesion.

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Author Biography

Dr. Mathew J. Burrows serves as the director of the Atlantic Council's Foresight, Strategy, and Risks Initiative in the Scowcroft Center for Strategy and Security. He was appointed counselor to the National Intelligence Council (NIC) in 2007 and director of the Analysis and Production Staff (APS) in 2010. As director of APS, Burrows was responsible for managing a staff of senior analysts and production technicians who guide and shepherd all NIC products from inception to dissemination. He was the principal drafter for the NIC publication *Global Trends 2030: Alternative Worlds*, which received widespread recognition and praise in the international media and among academics and think tanks. In 2005, he was asked to set up and direct the NIC's new Long Range Analysis Unit, which is now known as the Strategic Futures Group.

Burrows joined the CIA in 1986, where he served as analyst for the Directorate of Intelligence (DI), covering Western Europe, including the development of European institutions such as the European Union. From 1998 to 1999 he was the first holder of the intelligence community fellowship and served at the Council on Foreign Relations in New York. Other previous positions included assignments as special assistant to the US UN Ambassador Richard Holbrooke (1999-2001) and Deputy National Security Advisor to US Treasury Secretary Paul O'Neill (2001-02). He is a member of the DI's Senior Analyst Service.

Burrows graduated from Wesleyan University in 1976 and received a PhD in European history from Cambridge University, England in 1983.

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 - 38 The China Model or Chinese Economic Model refers to the political and economic policies of the People's Republic of China instituted after Mao Zedong's death in 1976 by Deng Xiaoping. The policies are thought to have contributed to China's eight-fold growth in gross national product over two decades. *Wikipedia*.
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