Negative Shocks, Positive Effects: An Impact Analysis of U.S. President Trump' s Announcement to Withdraw from the Paris Agreement (Postprint)

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Abstract

Accurately speaking, Trump' s withdrawal from the Paris Agreement was a decision of the U.S. federal government and did not encompass all U.S. local governments and enterprises. Due to the positive yet prudent open and progressive nature of the Paris Agreement, unilateral actions by individual parties are insufficient to terminate or even alter the "Paris climate process." The U.S. withdrawal from the Paris Agreement does not necessarily indicate that the United States will abdicate its leadership position in global climate governance, nor does it necessarily mean that China, the world' s largest greenhouse gas emitter and second-largest economy, can fill the void created by the U.S. withdrawal. Reactions from the international community and within the United States indicate that while the U.S. withdrawal from the Paris Agreement generated negative shocks, these subsequently yielded positive effects. In advancing the "Paris climate process," China' s leading role is indispensable; however, it must not be overly hasty, and can only assume limited responsibility, acting in accordance with the prevailing trends.

Full Text

Preamble: Special Issue on Global Governance of Climate Change

In early June 2017, US President Donald Trump announced America' s withdrawal from the Paris Agreement, triggering widespread concerns about the "Paris climate process" that the Agreement had initiated. With China' s total carbon emissions now ranking first in the world, both domestic pressure for structural transformation and external expectations from the international community require China to reconsider its role in global climate governance. This

issue of the Journal invites three experts to analyze the opportunities and challenges this development presents for China, examining potential impacts of US withdrawal on global emission reduction efforts, the necessity of climate action, and climate change' s implications for China' s medium- and long-term development. The contributors explore China' s possible attitudes, responsibilities, and policy responses in participating in the "global governance of climate change."

Negative Shock but Positive Effect: Analysis of the Impact of US President Trump's Announcement to Withdraw from the Paris Agreement

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Abstract

More accurately speaking, the withdrawal by US President Donald Trump from the Paris Climate Agreement represents the position of the US federal government but not necessarily that of local governments and the majority of the private sector. While concerns over the negative impact of the US decision are legitimate, unilateral withdrawal is unable to terminate or even stall the implementation of the Paris Agreement, as the framework is inherently positive, firm, open, and progressive. Reactions from the international community and within the United States indicate that the withdrawal has produced positive effects from this negative shock. The US withdrawal does not necessarily mean that the US will relinquish its leadership in global climate governance, nor does it automatically imply that China—as the world' s largest greenhouse gas emitter and second-largest economy—will fill the void left by America' s exit. To advance the Paris climate process, China' s leading role is indispensable, yet we must not rush; China can only assume limited responsibility and act according to prevailing circumstances.

Keywords: Paris Agreement, climate governance, Trump, withdrawal, role of China

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The climate change issue originated from scientific facts, became contested due to national interests, and has wavered because of international politics. Since the world' s major nations established the UNFCCC in 1992 to jointly address climate change, the global community has experienced the "zero-sum game" dilemma of the "top-down" rapid emission reduction model under the Kyoto Protocol, followed by the parallel tracks of the Bali Road Map and the near-miss of the 2009 Copenhagen Accord' s "three-track convergence," ultimately achieving a revolutionary breakthrough in global climate governance with the 2015 Paris Agreement' s "bottom-up" approach featuring broad participation,

nationally determined contributions, and adaptive implementation. Unlike the Kyoto Protocol, which took eight tortuous years to enter into force incompletely, the Paris Agreement met its entry-into-force conditions in less than a year and moved into the implementation phase.

In early 2017, newly inaugurated US President Trump indicated his intention to fulfill his campaign promise to withdraw from the Paris Agreement, casting a shadow over international efforts to advance the Paris climate process. Although Trump' s position was clear, he had not formally announced the withdrawal by the May 2017 G7 summit, leading some to speculate that he was merely posturing for commercial leverage and would ultimately remain in the Paris process. On June 1, 2017, Trump finally announced the US withdrawal. Despite sufficient psychological preparation, the announcement still triggered widespread global concerns about the Paris climate process.

Positive Energy from Negative Impacts

Concerns about Weakened International Political Will. During the Paris Agreement negotiations, China and the United States joined hands on several occasions , issuing joint statements and jointly submitting instruments of ratification, demonstrating strong international political leadership. Although the US position in the emission landscape under the Paris Agreement has weakened compared to the "Kyoto era," it remains the largest historical cumulative emitter of greenhouse gases and will continue to be the second-largest emitter for the foreseeable future[1]. The US maintains absolute dominance economically and militarily, a position not easily challenged by other economies, and its technological advantages remain globally preeminent. Consequently, when the US showed signs of wavering, it was naturally perceived as a weakening of international political will to combat climate change.

In climate negotiations, the US serves as the "chief representative" of the "Umbrella Group" . Would other members of this group (such as Japan, Australia, and Canada) follow America' s lead, as they did during the Kyoto process? At the May 2017 G7 Summit and June 2017 G20 Summit, a clear pattern emerged: 6 versus 1 and 19 versus 1 on climate change and the Paris Agreement. America' s "going it alone" received no endorsement or participation from any allies, demonstrating its isolation and the world' s unity in advancing the Paris climate process.

Concerns about Climate Funding Gaps. Addressing climate change requires substantial funding. Developed countries can self-finance or rely on markets, whereas developing nations—particularly least developed countries, landlocked developing countries, and small island developing states—have low development levels, high climate vulnerability, weak endogenous financial capacity, and heavy dependence on external funding. Once the US, as the largest developed country, formally withdraws, the anticipated global climate funding gap under the Paris Agreement would inevitably impede the Paris climate process.

This concern is realistic and valid. In the China-US Joint Statement on Climate Change, China, as a developing country, committed to contributing RMB 20 billion for South-South climate cooperation, while the US pledged USD 3 billion. Objectively speaking, given that China' s per capita income is less than one-fifth of America' s, the US contribution is not particularly generous. Since the 2008 global financial crisis, developed countries have experienced sluggish economic growth, with both willingness and capacity to increase funding declining significantly. Although China has demonstrated strong financial commitment, it remains a developing country with tens of millions of people living in absolute poverty, social security far below developed country levels, and severe environmental pollution and resource shortages. China does not possess the capacity to fill massive funding gaps.

However, from a different perspective, funding itself is not as critical as it seems. At the 1992 UN Conference on Environment and Development in Rio de Janeiro, developed countries pledged that their official development assistance would not fall below 0.7% of gross national income. In reality, apart from a few small Nordic economies, no major developed country has honored this political commitment. China achieved the UN Millennium Development Goals without relying significantly on developed country assistance. Moreover, even if climate finance commitments were fulfilled, they could not meet the enormous needs of developing countries in addressing climate change. Under these circumstances, Trump' s withdrawal serves as a wake-up call to nations and people suffering from "funding dependency syndrome," compelling them to embrace the notion of "abandoning illusions, getting down to earth, rolling up sleeves, and taking action."

Concerns about US Inaction. With its massive economy and high per capita carbon emissions, US failure to undertake emission reduction actions would inevitably create enormous negative impacts on the Paris goals. Indeed, Trump not only refused to provide funding for international climate efforts but also abolished numerous proactive domestic policies and reduced federal budget allocations for emission reductions. The impact is evident.

However, examining US history and reality dispels these concerns. Historically, after withdrawing from the Kyoto Protocol, the US continued moving forward on the low-carbon path, with both total and per capita emissions trending downward. US per capita CO2 emissions, which exceeded 20 tons annually in the 1990s, had fallen to less than 16 tons by 2016. This trend is inevitable and will not be halted by simple policy adjustments. In reality, low-carbon development represents the general trend and a source of competitiveness. US local governments and private sector enterprises will not voluntarily abandon their advantageous competitive positions. In response to Trump' s withdrawal from the Paris Agreement, numerous US state and local governments and businesses have expressed their intention to continue low-carbon actions.

Concerns about Slowed Low-Carbon Technology Progress. Research and development investment has time-lag effects and uncertainties. Conse-

quently, many countries allocate a certain percentage of their fiscal budgets to support low-carbon technology R&D and subsidies. For instance, feed-in tariffs for wind and solar power, subsidies for electric vehicles, and policy incentives for low-carbon buildings have effectively leveraged significant progress ("four ounces moving a thousand pounds") in low-carbon technology development and deployment. If the US federal government reduces fiscal support for R&D, it could slow the evolution of low-carbon technologies.

Yet from another perspective, government fiscal investment often yields disappointing results ("planting flowers with care that fail to bloom"), whereas corporate independent R&D frequently produces unexpected successes ("unintentionally planting willows that grow into shade"). Tesla' s electric vehicles in the US were not launched through government R&D funding. The enormous market expectations created by the Paris Agreement goals have formed a powerful "invisible hand," directing investors, entrepreneurs, and society at large to vigorously invest in low-carbon technologies.

Concerns about Lack of Leadership in Global Climate Governance. Following the Cold War, the US-dominated unipolar world created a psychological expectation that "the international community needs American leadership and American stewardship of international affairs." In global economic institutions such as the World Bank, International Monetary Fund (IMF), and World Trade Organization, the US holds a clearly dominant voice. In IMF-reported foreign exchange reserves for October-December 2016, US dollar reserves reached a record USD 5.05 trillion, accounting for nearly 64%, compared to 19.7% for the euro, 4.2% for the yen, and just over 1% for the renminbi. IMF voting rights are distributed as: US 16.77%, Germany 5.88%, UK 4.86%, Japan 6.02%, China 3.66%, Saudi Arabia 3.16%, and India 1.89%.

The international community cares about the US because of its dominance. However, this landscape is changing. In global energy consumption, the US share has declined from 29% in the 1970s to 16% currently. The US share of global output has also fallen from 40% in the 1960s to approximately 25% in 2016 —clearly in a downward trajectory. Meanwhile, China' s energy consumption share has risen from 7% to 23%, and its share of global output has increased from less than 5% to around 16%. Emerging economies are on an upward trajectory in global standing. Consequently, whether or not emerging economies like China and India are prepared, they have been thrust to the forefront of global governance. Although China, India, and other emerging economies cannot replace the US, together with the EU and other developing countries, they will demonstrate responsibility and commitment, ensuring that the Paris climate process does not stagnate or terminate on its own.

The Paris Climate Process Will Not Reverse

Trump' s attitudes and positions on climate change are clear, yet they are not based on scientific facts or international consensus but rather on "ideology" —

specifically, the self-centered "America First" mindset of "better that I let down the world than let the world down me."

Withdrawing from the Paris Agreement was an intention Trump had clearly expressed during his campaign. However, contrary to his reputation for swift action, Trump did not "cut the Gordian knot" but rather employed a "frog in gradually heating water" approach: appointing climate change skeptics to head the Environmental Protection Agency, repealing the Clean Power Plan, and drastically cutting environmental budgets. Regarding withdrawal from the Paris Agreement, he deliberately delayed a clear announcement, creating suspense and keeping the international community in anticipation. At the May 2017 climate negotiations in Bonn and the subsequent G7 Summit, he remained officially silent while leaking information to stir international interest, finally letting "the other shoe drop" at the White House on June 1, 2017. Unlike the US' s typical flip-flopping on international and domestic issues, Trump' s position on the Paris Agreement demonstrated unusual "consistency" and "predictability." His "anti-establishment" decision-making style seeks attention, creates momentum, and pursues "advertising effects" rather than exercising prudence, responsibility, or rigorous commitment. From a certain perspective, Trump achieved his goal: international and domestic US public opinion erupted with expressions of regret, condemnation, and some support, satisfying his original motive of "seeking attention."

In fact, Trump is well aware that whether the US withdraws from the Paris Agreement or not cannot prevent, let alone reverse, the global process of addressing climate change. This is due to four fundamental reasons:

1. The International Climate Landscape Prevents US "Veto Power." The 1997 Kyoto Protocol required ratification by 55 Parties (both Annex I and non-Annex I) for entry into force, with ratifying Annex I Parties needing to account for 55% of Annex I Parties' total 1990 CO2 emissions. The US alone represented 36% of this total. If other Parties (such as Russia with 15.8%) refused to ratify, the Protocol could not enter into force. After extensive EU efforts, Russia ratified the Protocol. Even though Japan (representing 7.6% of Annex I emissions), where the Protocol was negotiated, refused ratification, the Kyoto Protocol still entered into force and was implemented in 2005, albeit with limitations. The 2015 Paris Agreement' s entry into force does not distinguish between Annex I and non-Annex I Parties and covers all Parties, requiring ratification by at least 55 Parties accounting for over 55% of global emissions.

The 2015 Paris Agreement also required ratification by at least 55 countries representing over 55% of global greenhouse gas emissions. According to IEA statistics on CO2 emissions from fossil fuel combustion, in 2014 the US accounted for only 16.0% of global emissions, Russia 4.6%, and Japan 3.7%. Meanwhile, developing countries (non-Annex I Parties) increased their share of global emissions from 33.1% in 1990 to 57.5% in 2014. India' s share rose from 2.6% to 6.2%, while China' s surged from 10.1% to 28.1%.

Consider that even during the Kyoto Protocol era, when the US held a "quasi-veto position," it could not prevent the Protocol's entry into force and implementation. In today's fundamentally altered, multipolar climate landscape, how could the US possibly unilaterally dominate the global climate process? The answer is clearly negative.

2. The Paris Agreement's Mechanism Ensures Its Continuity. Unlike the Kyoto Protocol's "top-down" legally binding mechanism for emission reduction obligations, the Paris Agreement employs a "bottom-up" approach without strict legal constraints or penalties. The Kyoto Protocol mandated that during 2008-2012, average greenhouse gas emissions relative to 1990 levels be reduced by 8% for the EU, 7% for the US, and 6% for Japan—representing a degree of enforceability. In contrast, the 2015 Paris Agreement features "bottom-up" Nationally Determined Contributions (NDCs), deliberately avoiding the legally connotative term "commitment" used in the Kyoto Protocol and "pledges" used in the Copenhagen Accord. Parties' submitted NDCs are not incorporated into the Agreement's articles, follow no uniform format requirements, and are essentially voluntary actions. While the Paris Agreement sets global, strategic, and overarching goals and mechanisms—such as achieving peak emissions as soon as possible, limiting temperature rise to well below 2°C above pre-industrial levels, and conducting a global stocktake every five years—it contains no specific provisions targeting individual Parties and no penalty mechanisms.

The Kyoto Protocol's "mandatory emission reductions" were partially implemented despite opposition from the US, Japan, and Australia. It is foreseeable that the "voluntary" emission reductions agreed under the Paris Agreement will be even easier to implement.

3. Low-Carbon Development Has Become an Historical Trend. From technological and environmental perspectives, low-carbon development appears to have become an unstoppable historical trend. The cost of zero-carbon renewable energy has become competitive with fossil fuels, and the cost advantage of fossil fuels—particularly coal—is continuously diminishing. Even among fossil fuels, the shift from coal to lower-carbon natural gas represents emission reductions, and US emission reductions have largely benefited from the "shale gas revolution" replacing higher-carbon coal. Coal, the initial driving force of the Industrial Revolution, may seem relatively "cheap" in direct costs, but historical air pollution events were primarily caused by coal combustion. China's compressed industrialization process, which heavily relied on coal, has created smog that severely affects national welfare. India, still in the mid-stage of industrialization, already suffers from smog levels that have "surpassed" China's. Would the Indian populace allow high-carbon coal to continue unabatedly poisoning their health? Clearly not.

4. The International Community Further Consolidates Consensus. Based on mainstream reactions from the international community and within the US to Trump's withdrawal, the exit has not only generated minimal negative shock to Paris Agreement implementation but has also further consolidated

international consensus and strengthened the international community' s resolve to jointly address climate change. This will inevitably intensify national actions and advance the Paris climate process.

Active Leadership, Limited Responsibility

Following US withdrawal from the Paris Agreement, who will lead its implementation? When the US withdrew from the Kyoto Protocol, the EU struggled to take up the banner but felt overwhelmed and achieved less-than-ideal results. In implementing the Paris Agreement, the EU is a strong driving force but its power remains insufficient. Due to China-US efforts in facilitating the Paris Agreement negotiations and entry into force, on one hand, voices from the international community, including US officials, have called on China to fill the void left by America' s exit. On the other hand, many within China view the US withdrawal as an opportunity and believe China should step up as a leader in global climate governance. The author argues that China should play a role of "active leadership with limited responsibility."

Why China Should Play This Role Regarding leadership roles, we must first establish a clear definition or understanding. Leadership encompasses multiple levels: monopolistic, dominant, leading, contributing, and participating. During the Cold War, the US-Soviet rivalry competed for dominance. In the post-Cold War unipolar world, the US held a considerable monopolistic position. Clearly, China does not possess superpower status or mindset, but it maintains firm positions, makes substantial contributions, and leads by example, thus holding a leading position. This means China' s leadership will not seek to dominate or monopolize. Even countries with monopolistic and dominant positions in economic, political, and military terms cannot commit to funding, technology, or "Great Leap Forward" -style emission reduction targets in international affairs. China lacks both the capacity and necessity to fill the void left by US withdrawal in terms of funding and technology. On one hand, the demand for funding and technology is unlimited—more 无偿 donations are always welcome. China cannot satisfy this "unlimited" demand. On the other hand, after its founding, China engaged in "internationalist" aid, providing money, resources, and personnel abroad with utmost dedication, yet the results were not ideal.

Although the EU does not possess dominant leadership, its leading role is firmly established. India, as an emerging economy with relatively lagging development levels but enormous emission needs, holds a significant voice in advancing the Paris process. India and other relatively underdeveloped developing countries, unable to obtain concrete commitments and delivery of funding and technology, will not withdraw from the Paris Agreement as the US did. However, they will voice their demands and correspondingly slow the Agreement' s implementation. Given this reality, the international community should not expect the Paris Agreement' s execution to proceed rapidly, smoothly, or without obstacles.

As the world' s only country with a certain monopolistic position to dominate

international governance processes, the US cannot abandon its leadership in climate governance. After explicitly refusing to ratify the Kyoto Protocol, the US launched the Asia-Pacific Partnership mechanism outside the Convention framework to counterbalance the Kyoto mechanism, while retaining its voice in Kyoto Protocol meetings as a Convention Party. In other words, despite not being a Kyoto Protocol Party, the US did not relinquish leadership over its implementation. Faced with the firm positions and determination of China, the EU, and many other countries, the Paris Agreement' s implementation will inevitably be more effective than the Kyoto Protocol' s. Under these circumstances, we cannot imagine the US voluntarily abandoning its leadership in international climate governance. It is foreseeable that in future climate negotiations, the US will continue participating in some form similar to its involvement with the Kyoto Protocol. At an appropriate time, the US will return to the Paris climate process—possibly when Trump' s term ends, or even earlier. Given this US reality, China' s choice should be to assume limited responsibility despite unlimited demands, making active efforts according to prevailing circumstances.

How China Should Play This Role In summary, as a leader in the climate process, China' s key task is to manage its own affairs well. This includes: (1) advancing green, low-carbon, and ecological civilization transformation with tangible results; (2) actively fulfilling China' s submitted Nationally Determined Contributions to promote the realization of Paris Agreement goals; (3) actively engaging in bilateral and multilateral cooperation, providing moral leadership, and advancing the improvement of the international climate regime; (4) focusing on forming alliances with actual or potential leaders, leading nations, core supporters, and collaborators in global governance to seek common ground while reserving differences; and (5) on the basis and premise of mutual benefit, providing market-oriented funding through the Asian Infrastructure Investment Bank, BRICS New Development Bank, and other financial institutions to support low-carbon development and climate change responses in other developing countries.

Based on the above analysis, Trump' s announced withdrawal from the Paris Agreement will not cause disruptive damage to the Paris climate process; rather, it may help enhance consensus and strengthen positions among other leaders, core supporters, collaborators, and participants in the international climate process. However, we must recognize that regardless of whether Trump withdraws or not, the process stipulated by the Paris Agreement cannot proceed smoothly, without resistance, suspense, or difficulty. As a leader in global climate governance, China need not overreach to become a dominant power, nor should it lower its stature to follow the crowd. Instead, China should adopt a posture of "active leadership with limited responsibility," acting according to prevailing circumstances and its capabilities, making its due contributions to the implementation of the Paris Agreement and global climate governance.

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Footnotes:

In 2007, the UN climate conference in Bali, Indonesia, established negotiations on the Kyoto Protocol' s second commitment period, clarifying climate actions for Kyoto Parties (developed countries), non-Parties (developed countries), and developing countries—known as the "three-track parallel" negotiations. Subsequently, the 2009 Copenhagen climate conference produced the comprehensive Copenhagen Accord, which failed to be adopted. However, the legal framework of "three-track convergence" achieved in Copenhagen was inherited and strengthened in the Paris Agreement.

In 2014, during the Beijing APEC meeting, the Chinese and US governments issued a joint statement. Subsequently, at the 2015 UN Summit in New York, the heads of state of both countries issued another joint statement, strongly advancing the conclusion of the Paris Agreement. In September 2016, during the G20 Summit in Hangzhou, the leaders of both nations jointly submitted their instruments of ratification to the UN Secretary-General, facilitating the entry into force of the Paris Agreement.

The Umbrella Group is a coalition distinct from traditional Western developed countries, referring specifically to a group of nations with differing positions on global warming, comprising developed countries other than the EU: the United States, Japan, Canada, Australia, New Zealand, Norway, Russia, and Ukraine. The name derives from these countries' geographic distribution resembling an umbrella on a map, symbolizing a "protective umbrella" for Earth's environment. These nations largely refused to negotiate targets for the Kyoto Protocol's second commitment period.

Figures

Figure 1: Figure 2