

# UNRAVELLING CHINA'S ENVIRONMENTAL TRANSFORMATION: AN ANALYTICAL ECLECTIC EXPLANATION OF CLIMATE GOVERNANCE UNDER HYPER-MANUFACTURING

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## ABSTRACT

How can environmental stability go hand-in-hand with intense and persistent industrialization in the world's top manufacturing state? The traditional discourse on environmental stability and rapid industrialization is confined to a dissonant relationship between the two variables. Encompassing an inverse relationship, it indicates that environmental preservation acts as a hindrance in the process of industrial development. Despite many developing states that a highly dependent on industrialization, runs parallel to the conventional argument on environment. China, however, does not fit into the conventional box by portraying an image transcending the traditional argument. China has pursued intense industrialization, high manufacturing activities, but has also Managed to mitigate the severe environmental consequences through policy reorientation and institutional shifts resulting in decline of urban smog through the promotion of green technology and integration of environmental objectives in national strategy. A plethora of literature regarding this case is elucidated solely through a single isolated perspective (domestic institutions, international level commitments, and environmental norms). Projecting light on a single dimension in isolation, to illustrate the case, fails to encompass the interaction between these mechanisms that play a pivotal role in bringing about this manifestation. This study addresses this explanatory limitation by adopting analytically eclectic framework dealing with constructivism, neo-liberal institutionalism and historical institutional. Further through explaining outcome process tracing allows to identify and analyse the links between political legitimacy, environmental instability and institutional shifts during 2012 to 2024. Gathering evidence through environmental datasets and official policy documents indicates how the three mechanisms overlap to bring about policy outcomes reflecting environmental preservice. Despite positive results, limitations of regional disparity prevail, as maritime pollution governance remains a challenge. The study highlights the complexity of environmental shifts and the role of different intersecting mechanism contributing in it manifestation, making it inefficient to explain through isolated mechanisms.

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## INTRODUCTION

Human history witnessed a prominent industrial evolution which orchestrate the economic rise of China. The 1978 economic reforms fostered China's emerging position as a central economic hub, infusing a huge chunk of exports and production in the global economy. The results of rapid industrialization unfolded in benefits, encompassing China's rise and prominent mitigation of poverty, but costs of the industrialization process were also evident, in the form of exacerbating environmental deterioration manifesting in the form of water pollution, huge discharge of industrial waste and smog. This raised concerns regarding social stability and sustainable development in China, that were fuelled by environmental obstacle, especially in the early 2010s. (Shapiro, 2020)

The concentration of environmental severity in industrial zones make the prominently apparent in China. The accumulation of greenhouse gases and abnormal climate shifts have exacerbated the environmental condition of China enough that it gained global attention. One manifestation are the periods of extreme smog prevalent in Beijing, Tianjin, and Hebei. The environmental consequences have also managed to seep their way into the maritime dimension in the form of shipping waste, plastic waste and contaminated water containing industrial waste. This is contributing to worsening China's coastline. The consequences have revitalized the debate of

the zero-sum game between environmental stability and industrial growth. The gist of the conventional assumption implies that environmental degradation is the inevitable effect, caused by industrial development. (Grossman & Krueger, 1994)

Specifically, in export-led development states, China, however, seems to have transcended the confines of the conventional cause-effect relation between industrial development and environmental severity. Despite its emergence as a pivotal manufacturing state in the global economy and its endorsement of export-led development strategies, its initiatives to foster environmental stability has proven to bear fruit in the early 2010s. With mitigation of air pollution in central cities have manifested positive outcomes. The states investment in ecological restoration have contributed to constructing more practical environmental regulations. China has also taken steps to construct its global image as an 'ecological civilization' by integrating discourses on environmental protection in the framework of national development. This intersection which was considered to opposing poles in the conventional framework questions the traditional dissonance between the two factors. (Hansen, 2018)

The article is centred on dealing with the following research questions: what approach did China adopt to mitigate the environmental consequences of economic development without halting the industrial growth process between 2008 and 2025? Another vital question to address: what are the successful manifestations of China controlling maritime pollution and industrial waste control? The mentioned questions encompass a broader discourse of sustainable industrialization and climate governance.

## **RESEARCH QUESTIONS**

1. How environmental shift took place in China between 2008 and 2026 that it went beyond the conventional argument the hyper- manufacturing and environmental stability cannot go hand in hand?
2. What were the means of interaction among factors like international climate governance, environmental norms and institutional shifts that led to the mitigation of environmental consequences?

## **LITERATURE REVIEW**

The existing scholarship do not fully complement in explaining the contemporary case of China. Some project international environmental commitments as incentives for China's environmental orientation.

Other underscore indigenous institutions inclination towards enhanced regulation as the primary factor. Another constructivist body sheds light on ideational reorientation and the increased vitalisation of ecological civilization as a norm reorienting state priority. The obstacle in clear explanation of China's case is mostly due to isolated analysis of each perspective that contributes meaningful interpretations regarding the case, therefore overlooking the intersected contributions in analysing environmental stability. (Kostka & Nahm, 2017)

An analytically eclectic framework is adopted in the article in order to deal with the gap. This framework underscores the intersected contributions of constructivism, historical institutionalism and neo-liberal institutionalism. The logic of analytical eclecticism implies that isolated frameworks cannot elucidate complex environmental transformations without ambiguity and fuzziness, instead it requires an integrated approach with encompassing multiple levels of analysis. Therefore, in context of China, the logic contends its environmental reforms as product catalysed by evolution of domestic institutions, international climate commitments and its constructive image of environmental stewardship. (Rudra & Katzenstein, 2010)

The study adopts an 'explaining-outcome process tracing approach in methodology to unveil the factors linking environmental degradation to policy shifts and environmental effects. Instead of adopting a descriptive approach for explaining policy changes, the adopted methodology enables to identify sequential mechanisms contending that environmental degradation sparked public concerns which compelled state to respond to the up rest and therefore, orchestrated institutional reforms to deal with the environmental crisis which manifested in the form of mitigation. Keeping maritime governance as a central concern which is mostly dealt with little consideration even though it withholds growing vitality due to initiatives like blue economy and climate adaptation ( Beach & Pedersen, 2013)

The study aims to contribute substantially in international relations and environmental governance literature, as it bridges the gap between the two by projecting China as a quintessential of environmental transformation, under the lens of eclectic theoretical framework. It further transcends isolated confinements of analysis and integrates Chinese environmental politics and environmental consequences. Lastly, it delineates environmental regulation framework in authoritarian development

state and how it can simultaneously achieve ecological goals and industrial development. Additionally, highlighting the limitations of sustainable development frameworks in the coteremporary era

The emergence of the notion of ecological modernization encompassed the assumption that economic development and environmental stability can run parallel to each other in industrialized societies. It emerged as a theoretical framework contradicting the conventional framework of environmental sustainability that asserts on the destructive nature of industrialization and development at the expense of environmental degradation. Environmental modernization contends that reformation in institutions that align with sustainable industrial dynamics can limit environmental degradation despite industrial development. Therefore, it refutes the notion that industrial development and environmental stability has an inverse relationship with another and they can be compatible through state interventions and regulations through coupling with technological advancement. (Mol & Sonnenfeld, 2000)

The theory of ecological modernization is corroborated by the case of China's environmental reforms. It diverges from the traditional framework in which industrialization and environment are anti parallel, therefore providing an exceptional case in which environmental regulations during the process of industrialization mitigates the environmental consequences. Heavy reliance on industrial development did hinder China's environmental goals as they were complemented by institutions, technology and environmental governance. Additionally, environment is further preserved through investments in green technology and renewable energy. (Wang, Moore, Martiny, & Primeau, 2019)

Many critics pinpoint the limitation that ecological modernization keeps other variables constant, when proving the assumption of a positive relationship between industrialization and environmental stability, which cannot be kept constant on the practical stage, like institutional and political obstacles. In context of China, the environmental reforms running parallel to industrialization in 2013, cannot be solely illustrated by ecological modernization. A holistic framework needs to be adopted that covers a plethora of factors orchestrating environmental governance. (York, 2003)

The arena of climate governance encompasses international institutions, coordination for climate preservation and norms that shape environmental

behaviour that falls under the logic of appropriateness. Neo-liberal institutionalists imply that the primary driver of environmental commitment is not national but international, that fosters cooperation and encourage states to adopt institutional reforms that align with environmental goals. Therefore, under neo-liberal institutionalism, international level factors like global climate governance foster the domestic initiatives for institutional reforms. (FALKNER, 2016)

Many scholars contend that Chinas position in the international arena had a substantial impact on its environmental stability. Its increased participation in global climate regimes and environmental negotiation in international platforms has fortified its institutional stance on environmental preservation. These investments have also contributed to investments in low-carbon development strategies to minimize pollution. Compliance with the framework of Paris agreement has also consolidated the commitments of China to reduce carbon intensity. (Qi & Wu, 2013)

Different scholars have distinct interpretations regarding the impact of international pressure on domestic environmental policies of China. Some imply that compliance to norms have limited contribution in institutional reformation instead it is primarily driven by national interest. Others assert that domestic political institutions supersede international climate opportunities when it comes to influencing policy outcomes. The debate underscores the relationship between global climate governance and domestic policy orientation which cannot be neglected when analysing policy reformations. (Kostka & Nahm, 2017)

A prominent aspect of literature encompasses the assumption that defines environment orientation of China through the lens of domestic politics. Initial scholars highlighted the dissonance between economic growth and environmental protection. From which industrialization was mostly prioritized at the expense of environment. This resulted in neglectation of preserving environment in regulatory policies. (Mertha & Ithaca, 2009)

Reforms are evident in the ministry of ecology and environment 2018 which fostered coordination and regulation. Another prominent dimension of scholarship contends that the need for regime legitimacy also triggered environmental concerns in state. As worsening environment was exacerbating health issues and social instability. Public concern regarding pollution, specifically smog in 2010 lobbied government for more legitimate and practical actions to tackle with the environmental issues.

The constructivist perspective, this context embodies the notion of ecological civilization which alludes to the reorientation of relation between environmental stability and industrial development. It is apparent that the notion is integrated in contemporary environmental discourse of China. This integration corroborates the argument that ideational reorientation has significant contribution in institutional reforms. ( Geall & Ely, 2018)

The environmental aspect of maritime region remained an underexplored and neglected arena in existing literature, as it is primarily centralized on land-based pollution for instance urban smog and industrial pollution, whereas marine based environmental issues including coastal degradation and shipping emission are highly neglected when it comes to environmental regulations. This neglect is not affordable especially in case of China, that is labelled as one of the vital maritime economies. Therefore, it is evident that China has taken initiatives for marine environmental

## **THEORETICAL FRAMEWORK**

To adopt a theoretical lens, it is vital to identify if it is able to triangulate international level analysis, domestic institutions and ideational evolution in context of Chinas environmental reformation. Chinas policy shift cannot be solely comprehended by a single framework as a plethora of elements influenced Chinas shift from environmental degradation to environmental preservation alongside industrialisation. In order to look at this broader picture, the study adopts analytical eclecticism which extracts insights from constructivism, historical institutionalism and neo-liberal framework and intersect the extracted characteristics. (Rudra & Katzenstein, 2010)

The emergence of this framework aimed to address the rigidity and narrowness of paradigms in international relations. The composite nature of social and political dynamics is driven by a plethora of mechanisms that are active at different levels simultaneously. Therefore, in order to illustrate without ambiguity, analytical eclecticism combines explanations from different paradigms which paves the way for evaluating multifaceted policies, for instance, environmental regulations. (Katzenstein, 2012)

The elucidation of the adoption of analytical eclecticism runs parallel to the context of china as the policy shift cannot be merely explained through china's international commitment to environment

instead other variables also intervene and impact such shifts substantially. This allows analytical eclecticism to act as meta-theoretical framework mitigating the reductionism of traditional theories.

## **CONSTRUCTIVISM AND ECOLOGICAL CIVILIZATION**

Constructivism asserts that state behaviour is primarily determined by ideas, norms and identities. It serves as a contradiction to materialist approaches, that keeps the ideational realm secondary to economic and strategic factors. Constructivism contends that interests of states are a product of social construction through discourse and evolution of norms. Therefore, it reinforces the argument that reforms in environmental governance cannot be explained just through materialist incentives. It should also take into account the rise of discourses on sustainability and development the framework is highly pertinent for illustrating the emerging notion of ecological civilization in China. The rise of this idea served a norm integrating in central governing structures which contributed to reconstructing the relation between industrial development and ecological preservation. This ideational shift halted the presumption of environment as an obstacle to economic growth, instead it redefined it as a vital component for long term national rejuvenation and fortification. This norm manifested in the form of legitimate environmental regulations and green developments. ( Wendt, 1999)

Additionally, this dimension of scholarship also highlights how the emergence of these environmental norms and its pairing with national legitimacy has an impact of Chinas international position as a responsible global power and a compliant actor to international environmental norms. (Finnemore & Sikkink, 1998)

## **HISTORICAL INSTITUTIONALISM**

This underscores the influence of institutions in the shift of policy outcomes. Historical institutionalists assert the vitality of patterns that institutions create overtime which further impact the policy choices. The presumption runs parallel to explaining Chinas policy evolution. It is evident that Chinas early governance structure embodied dissonance between economic and environmental goals which the prioritization of industrial development at the expense of environment. The worsening condition of ecological stability created pressure on institutions to

bring about reforms. A quintessential is the early 2010s smog crisis that triggered a need for a more centralized form of environmental regulation. The altered incentive structure after 2013 explains the reformation process in the light of historical institutionalism. (Lieberthal & Oksenberg, 1988)

## **NEOLIBERAL INSTITUTIONALISM AND CLIMATE GOVERNANCE**

The lens endorses the significance of international institutions in fostering cooperation among states. Despite their existence in an anarchic world, state cooperation through these platforms can create a sense of collective agreement based on intersecting interests that reduce uncertainty. Climate change being a transboundary issue, incentivize state to manifest a collective response through policy coordination. (Keohane & Martin, 1995) Therefore, it is important to project light on the neo-liberal analysis of Chinas growing environmental concern. Its increased presence in global climate governance and active role in international agreements like the Kyoto protocol and Paris agreement influenced substantially to align Chinas with prominent environmental objectives. These objectives are pursued mostly through renewable energy investments and green technology. (Held, McGrew, Goldblatt, & Perraton, 1999)

Despite the relation between international commitments and domestic alignment. There is a limitation of neo-liberal institutionalism that it does not elucidate the environmental results that vary across sectors. Despite incentives created by international commitments, true effectiveness of policy outcomes is determined by domestic implementation. This highlights that international level analysis encompassing international level commitments is not 'the' perspective sufficient in itself, but 'a' perspective that should also be take into account in relation to other adopted paradigms of analysing policy outcomes. Therefore, the triangulation of ideational impact, international commitments and domestic institutional evolution sets the stage for understanding the environmental policy shift of China that redefine the relation between development and environment

## **METHODOLOGY**

A qualitative research design is adopted and complemented by a single case study and explaining-

outcome process that projects China's ability to efficiently deal with environmental degradation along with investing equally in development as one of the highly industrialized countries from 2008 to 2026. Instead of adopting a descriptive approach to these environmental policies, the study endeavours to identify the intersection and overlapping of the mechanisms that depicts the intersection between environmental stability, climate-based international commitments, institutional shifts and political incentives that generated those outcomes in the final form of environmental policies. The plethora of factors involved and their composite relationship with one another that overlap in complex ways to generate an environmental policy compels to endorse a qualitative approach that may not be simplified through statistical analysis. (George & Bennett, 2005)

### **Single Case Study Design**

The adoption of a single-case study design is due to the central consideration of China as a means of understanding environmental policy shifts. It aims to describe the phenomenon under evaluation through a contemporary context. China in this regard is a quintessential as it reflects an exceptional nature due to its dissonance from traditional environmental frameworks. It is evident that environmental concerns and intense industrial growth run parallel in China. The deviancy of Chinas from conventional incompatibility of economic development and environmental protection makes it a distinct case that aligns with the assumption of policy shifts adopted in this study. (Yin, 2018)

The case of China serves as a means to identify patterns of policy evolution and institutional shifts which would mostly be hindered when doing a cross-national comparative analysis. The period under analysis is from 2008 to 2026, which embodies prominent environmental steps making it easy to identify policy shifts. These milestones include 2013 Air pollution prevention and control action plan, China's role in Paris agreement, development of ministry of ecology in 2018.

## **EXPLAINING OUTCOME PROCESS TRACING**

Explaining outcome variant of process tracing is adopted to scrutinize the mechanisms active to determine policy outcomes. In contrast to theory-testing branch of process tracing which is confined to corroborating existing theoretical frameworks,

explaining outcome process encompasses the tracing that aims to reorient sequence of event in a particular case. The outcome under consideration in this study is Chinas increasing environmental preservation running parallel to industrial growth. (Beach & Pedersen, 2013) Therefore, the central focus of this analysis encompasses the trigger of social concern propagated by pollution and environmental crisis, this concern sparked consideration of governance and legitimacy by state government which resulted in institutional reforms that manifested environmental stability. Instead of being bound to simplistic correlations that approach embodies a complex analysis of causes and outcomes by considering several intervening variables contributing to influencing the outcome. (Bennett & Checkel, 2015)

## **DATA SOURCES**

Insights from a plethora of sources are ingrained in the study, collected through qualitative documentary process. For instance, five years' plan, China's government policies, official speeches by Chinese leaders, reports of ministry of ecology and environment, environmental legislation. Such sources provided legitimate evidence free from ambiguity and remains pertinent to the considered variable of institutional reforms, state incentives and policy orientations.

Validity is fortified by pairing direct official sources with secondary ones encompassing academic journals, reports of international institutions like the world bank, UNEP and Air quality life index. Combining all these sources and identifies the intersection between them fosters the credibility of the study.

### **Evidence Evaluation and Process Tracing Tests**

Van Evera 1997 provided the process tracing process which was subsequently enhanced by beach and Pedersen 2013. This process is also integrated in the study that aims to evaluate the legitimacy of empirical evidence and how much it corroborates the specific claims.

The straw in the wind tests resonate the linkages to pinpoint preliminary indications. For instance, political discourse working as a link between environmental deterioration and social concerns. Although it does complement the analytical process, but it is not sufficient on its own for corroborating the claims. Hoop tests aim to underscore the presence of the vital components of proposed claims. For example, the identification of evidence of environmental regulation and institutional shifts would allow the claim to be valid. Further, the

smoking-gun tests encompass the evidence that solidifies the claims of a specific casual mechanism. Lastly, the doubly decisive test involves the consolidation of one explanation while simultaneously weakening the alternative one. (Evera, 1997)

The endorsement of these tests in the study reorients the linkages between environmental instability, ecological civilization, institutional evolution and environmental results. The methodological trajectory constructs a strong elucidatory foundation to the composite process of Chinas institutional reformation

## **FINDINGS**

### **Smog Mitigation: from Airpocalypse to Environmental Governance**

Findings depict that the prominent environmental milestone was achieved in post 2013 by China, that was marked by substantial decline of urban pollution. Before 2013, radical manifestation of industrial endeavours including activities like coal-based energy production consequent to smog in major urban areas generating a form of 'airpocalypse' in 2013 that sparked a need for shift in environmental consideration, by characterizing it as a political issue rather than a mere technical problem. Public concern triggered state considerations of environmental problems, making it a national endeavour to improve air quality. (Chen Y. L., 2024)

An epitome of taking huge environmental steps is the manifestation of the Air pollution prevention and control action plan 2013-2017. The implementation of this plan restructured environmental governance structure in China, characterizing of enhanced monitoring systems, stricter emission regulations and increased use of cleaner energy sources as an alternative to coal. Chinese researchers illustrated the fall of concentration by PM2.5 in Beijing-Tianjin-Hebei areas during this era of shift in environmental governance. The plan worked more efficiently relative to previous plans as it also consisted of evaluations mechanisms of environmental performance. (Cheng, 2021)

The vital contribution of technological development as a complementary element was underscored through the process tracing evidence. Investments in electric vehicles and clean energy in order to mitigate the environmental consequences of high industrial development. This shift towards adopting and investing in environmentally friendly industrial growth allowed China to have a cleaner industrial production.

## INDUSTRIAL WASTE CONTROL AND GREEN MANUFACTURING

The refinement of industrial waste governance is also revealed in findings. The initial period of industrialization resonated the conventional industrial-environmental framework in which industrial growth was prioritized and pursued at the expense of environmental degradation. Further, a shift is evident in which the state endorsed ecological civilization in its policies that reoriented state prioritization. (Wang X. Z., 2023)

A prominent finding revealed the relation between industrial waste decline and structural shift in the industrial process which indicated the promotion of high-tech industries while phasing out industries that produced an abnormal amount of pollution like cement, coal and steel. The researchers indicated that cleaner production processes played a pivotal role in the reduction of pollution without reducing industrial production. (Chen H. F., 2024)

In 2016, regulatory alignment was foster through means of environmental inspections which allowed central authorities to monitor local ones in order to ensure compliance and any form of divergence or violations could lead to penalties. This stricter form of monitoring paved the way for efficient environmental regulation and improvement. This depicts the argument that policy implementation needs to be paired with policy enforcement in order to achieve state environmental objectives with minimum hinderances possible. (Huang X. &, 2023) Despite progress, certain obstacles can still be identified through process tracing evidence. Regional disparities are one of them indicating the areas that consist of relatively weaker governance capacities. Additionally, despite central authorities promoting the stable balance of consideration between environmental stability and industrial growth, many local governments still abide by the conventional framework subordinating environmental preservation as a state objective. (Chen H. F., Beyond central-local relations: The introduction of a new perspective on China's environmental governance model, 2024)

## MARITIME POLLUTION GOVERNANCE

### *Progress with Persistent Constraints*

Maritime environmental structure of governance projects a more nuanced view relative to air and industrial pollution mitigation processes of China. Findings reveal that, China being a picturesque of

maritime economy and maritime development and trade, considered marine protection as a strategic objective that encompasses coastal protection, blue economy and ecological preservation. The 2010s was marked by the manifestation of these objectives through identifying and mitigating marine pollution sources. (Chen H. F., Beyond central-local relations: The introduction of a new perspective on China's environmental governance model, 2024)

Some of the most visible sources of maritime pollution were revealed to be land-based sources including urban and industrial waste. Elevation was attempted by implementing wastewater treatment that were stricter in nature. Economically advanced coastal areas like Guangdong, Jiangsu and Zhejiang witnessed coastal improvement providing empirical evidence of the success of these governance measures. (Huang L. Z., 2024)

Limitation was also visible. One of the major obstacles that needs to be tackled is plastic pollution in maritime regions. As China generates a substantial amount of plastic as a major trading economy and especially carrying out a huge chunk of this trade through maritime pathways. Micro plastic contamination has reigned over coastal regions despite stricter regulations. (Zhang et al., 2022; Yang et al., 2024. Trading through maritime pathways has also exposed the region to port activities and shipping related emissions. Despite steps taken for environmental protection like emission control zones and green ports, there remains a disparity of implementation of these initiatives across regions. Comparative to air and land pollution mitigation, process tracing evidence suggests that maritime environmental protection has prospered slowly. Major hindrance of this slow progress is the complexity of number of regulatory actors. (Yao, 2023)

## CLIMATE GOVERNANCE INTEGRATION AND ENVIRONMENTAL TRANSFORMATION

The last aspect of finding projected the integration of environmental regulations in broader climate governance endeavours. Chinas environmental shift is impossible to comprehend by merely considering the strategy for domestic pollution control. Instead, the picture with broader than that encompassing a plethora of linked factors including energy transformation, national environmental objectives

and international commitments with incentive for environmental leadership aims. (Teng, 2021)

International climate commitment incentivized the need for domestic policy shift, as process tracing evidence indicates. Chinas prominent participation in the Paris agreement consolidated policy objectives that prioritized environment along with development. Empirical evidence portrayed government initiatives to decrease carbon intensity and investment in clean energy initiatives as a form of compliance to low-carbon international commitments. Climate governance is able to achieve to ends simultaneously, one is alignment of environmental reforms with political justification and the other is the promotion of Chinas international image as a responsible international actor fit for environmental leadership. (Shapiro, 2020)

A vital depiction extracted from findings in the intersection between environmental preservation and environmental modernization. Clean energy usage as pollution free alternative to traditional energy sources, replacement of conventional pollution inducing vehicle with electric ones which are also an epitome of clean energy consumption and green finance . The emergence of these green technologies paved the way for economic opportunities. Significant work in Chinese journals indicate the vitality of green technology in complementing both industrial and sustainability objectives of the state. (Sun, 2023)

The gist of findings corroborates the primary claim of the study regarding the institutional shift of Chinese environmental policies that diverge from conventional industrial-environmental framework. The evolution took place with a plethora of variables at play, including environmental crisis, social concerns that further sparked reforms and a shift in trajectory in not only policy formulation but policy implementation and enforcement resonating stricter regulatory frameworks. The variables did not function in isolation to bring about a shift, instead a deeply integrated chain with cause and outcome relationship unfolded the environmental shift in China, which indicates that a single variable is not ample enough to provide evidence for the claim without considering its relationship with other casual mechanisms. Despite the progress represented by empirical evidence in the form of achieving smog reduction. However, the results are uneven riddled with regional disparities within the state. Challenges remain, especially in the maritime region despite mitigatory initiatives which could fuel the already present environmental crisis.

## **DISCUSSION**

### ***Theoretical Implications***

The findings unfold into theoretical discourse regarding the conventional frameworks in international relations and environmental politics. The emerging environmental governance frameworks in countries embodying intense industrial growth compels to revisit conventional frameworks built of the argument in which there is a dissonance between environmental stability and industrial growth. The case of China diverges from these conventional frameworks contending that environmental stability is not necessarily impossible in post-industrial states. Findings reveal that Chinas institutional shift questions the conventional environmental politics as it was able to manifest its position a one of the top industrial states and reduced a substantial amount of air pollution. The context allowed to transcend the bounded impossible convergence between development and environmental preservation a paved the way for ecological modernization alluding to sustainable development outcomes. Therefore, instead of being an obstacle to industrial growth , environmental protection and regulation became a part of Chinas modernization objectives. (Huang L. Z., 2024)

The role of ideational shifts in bringing about institutional evolution is explained through constructivist debates. The rise of 'ecological civilization as a new normative framework shifted policy priorities and centralized environmental protection as one of the primary state objectives. Instead of merely defining shifts through strategic incentives policy transformations were elucidated through the impact of normative evolution influencing institutional buildup and public opinion. The ecological civilization compelled to construct an image in which political legitimacy was determined by efficiency of environmental governance indicating the norms play a vital role in determining policy orientation. (Hansen, 2018)

Institutional discourse highlighted the element of bureaucratic restructuring. International participation did not solely bring about a shift, instead it was backed by an entire institutional process of policy formulation and their implication in the form of practical outcome. Instances in context of Chinas included the establishment of ministry of ecology and environmental, environmental surveillance and stricter ecological evaluation processes for enhanced

accountability. Contending that convergence of policy formulation and enforcement plays a significant role in shifting institutional frameworks. (Kostka & Nahm, 2017)

The endorsement of analytical eclecticism assists in elucidating the composite nature of environmental transformations. Adoption of isolated framework would limit the analytical process due to the interconnectedness of constructivism, neo-liberal framework and institutionalism. The interaction of normative shifts, institutional capacity and international compliance makes it impossible to only consider one of these mechanisms alone to illustrate the case of China.

Lastly, the climate governance dimension in the context of global south triggers a broader debate addressed by findings. The complex reality of China in which the simplistic trade-off between industrial development and environmental protection is not visible questions the conventional framework that dominates most of the existing literature. Despite standing out of the traditional trade-off by achieving prominent environmental objectives through stricter policies, challenges still prevail including disparities and hindrances in maritime regions. The findings highlight that western pathways to environmental governance should be transcend, and consider non-western contemporary pathways that redefine climate governance and modernization. (Chen Y. L., 2024)

The study also underscores the relation between environmental regulations and authoritarian governance. Conventionally, comparative politics literature reflects positive environmental performance with democratic states due to characteristics of accountability, transparency and efficient policy responses. However, the case of China, compels to re address this comparative politics trajectory that considers authoritarian governance divergent to environmental stability. Empirical evidence depicts that as protection of environment intersects with political legitimacy centralized authority highly considers implementation and enforcement of environmental policy. Therefore, the claim of inherent dissonance between authoritarian regime and consideration of environmental stability remains limited in face of empirical evidence found in the contemporary era. (Fredriksson, 2013)

A transformation is also observant in the discourse of state capacity in environmental regulation. The literature encompassing this discourse contends that there exists a governance model with independent

mechanisms, therefore withholding a balance between market-based mechanism and regulation, however, China portrays a contrasting image of an integrated governance framework with simultaneous working of mechanism. Instances like carbon trading pilots, ecological compensation schemes and green finance indicates the working of governance structure with several mechanisms linked and combined with national strategy. This paves the way discourses on hybrid governance models that outdates market led and state led environmental governance dichotomies. (Pan, 2023)

Findings also underscore the argument regarding norm localization alluding that international norms endorsed by China do not directly seep into local policies in their original form instead they are selectively adapted to align with Chinas developmental objectives and filtered through discourses on ecological civilization and high-quality development. This indicates that international norms are moulded in a way that it does not diverge from national policy goal. This is done through the process of selective adaptation. Therefore, re-addressing the neo-liberal argument. (Sun, 2023)

The environmental security within the domain of international relations conventionally defined in contemporary discussions as a developmental problem. China, on the other hand, provides a diverging view by integrating environmental security into national security. As environmental instability factors like air pollution, smog, water contamination leading to it scarcity and marine degradation heavily influence factors like social stability, food security, economic stability. This extension of securitization as also broaden the scope of governance through overlaps between different governance levels. The evidence suggest that environment security isn't confined to the field of environmental policy instead it is one of the central components of national security.

Sustainable development in developing economies is also a debate highlighted by the study, the case of China provides empirical evidence indicating that environmental institutional shifts are not linear in nature instead they are manifested through interaction of mechanism including state capacity, leadership, technological advancement, social responses and international environmental norms. The lens of process tracing analysis indicates that a single variable cannot possibility evaluate such complex transformations riddled with composite interactions of a plethora of variables overlapping over one another. Additionally, the eclectic

framework applied to other developing economies like Vietnam, Indonesia, Brazil and India provides a comparative analysis that compels to redefine the conventional argument regarding environment in developing economies through provision of contextual explanations of climate governance by analysing the case of China.

## **CONCLUSION**

The study provides an elucidation regarding China's environmental strategy as an intense industrial economy, its approach goes beyond the traditional binary of industrialization and environment, thus corroborating that mitigation of environmental consequences is possible in hyper-manufacturing states. Through application of analytically eclectic framework and explaining outcome process tracing, it is evident that China's shift in environmental strategy along with intense development activity cannot be solely determined by international commitment, policy orientation, and institutionalism in isolated manner, instead it is vital to account the intersection and linkages between these variables. Therefore, the study employs the analysis of China's environmental policy shift by pinpointing the interaction between evolution of domestic institutions, reconstruction of international environmental norms resulting in the emergence of 'ecological civilization', technological advancement, and global climate governance. This interaction generated an alignment between economic modernization and ecological governance.

The environmental shift in China's institutional structure does necessarily indicates an absolute environmental resolution. It instead reflects the consistent evolution of governance structure through the interaction between a plethora of mechanism. Evidence resonates the decline of industrial pollution indicating the capacity of public policy to deals with environmental issues. However, this manifestation is not free from limitations, obstacles like regional disparities prevail, especially regarding the mitigation of marine pollution.

The vitality of analysing multifaceted policy outcomes is fortified through the means of applying analytical eclecticism. This alludes that an individual casual force can hardly generate such composite environmental shifts as reflected by China, instead it is a product of interaction among ideas, institutions and governance frameworks. Through the

triangulation of constructivism, neo-liberal institutionalism and historical institutionalism. Such intersection provides a pluralistic theoretical orientation for explaining environmental governance. The context of China also paves the way for the prominence of sustainable industrialization. This contends that viewing environmental regulations as a hindrance to economic progress is an outdated view. Environmental regulations encompassing technological innovation and long-term policy build-up makes it possible to ensure environmental stability along with economic development. The governance framework portrayed by China, increases the relevance of parallel progress in environmental objectives and economic objectives in a broader dimension. The advancement of international community regarding the pursuit of environmental objectives makes room for research on governance adaptability to the requirements of ecological sustainability while keeping in view of the economic objectives. Further, comparative research on increasing the possibility diversification of pathways leading to environmental transitions.

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