

THE IMPACT OF SANCTIONS ON THE DEVELOPMENT OF THE IRAN-PAKISTAN GAS PIPELINE: A POLICY ANALYSIS

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ABSTRACT

This study examines the profound impact of US and UN sanctions on the development of the Iran-Pakistan gas pipeline (IP pipeline), a critical energy infrastructure project. Utilizing a policy analysis framework, this research explores the direct and indirect effects of sanctions on the project's financing, construction, and operational feasibility. Direct impacts include financial constraints and technological limitations, hindering Iran's ability to secure necessary resources and expertise. Indirectly, sanctions have eroded investor confidence, destabilized regional energy security, and limited Pakistan's access to crucial financing and technology. Despite these challenges, Pakistan and Iran have pursued various policy responses, including diplomatic efforts, alternative financing mechanisms, and strategies of economic resilience. However, the effectiveness of these responses has been limited, highlighting the enduring challenges of navigating complex international sanctions regimes. This research analyzes the geopolitical implications of these sanctions, including the roles of regional actors like China and Saudi Arabia, and proposes alternative policy options for Pakistan and Iran to advance the project. Recommendations include diversifying financing sources, enhancing regional energy cooperation, strengthening domestic energy infrastructure, and engaging in strategic diplomacy. The findings underscore the vulnerability of large-scale energy projects to geopolitical pressures and the need for enhanced regional cooperation to ensure energy security. Future research should explore alternative financing mechanisms, the role of

regional actors, and the long-term socio-economic and security implications of the pipeline's delays, and the viability of renewable energy alternatives. Ultimately, this study contributes to a deeper understanding of the complex interplay between sanctions, energy security, and regional geopolitics.

Keywords: *Sanctions, Development, Iran, Pakistan, Gas Pipeline.*

Introduction

In a world increasingly defined by the precarious balance between energy demands and geopolitical realities, the Iran-Pakistan gas pipeline (IP pipeline) stands as a stark testament to the complexities of international cooperation amidst persistent external pressures. This project, envisioned as a lifeline for Pakistan's burgeoning energy needs and a symbol of regional connectivity, has been perpetually caught in the crosscurrents of international sanctions, transforming it from a mere infrastructure initiative into a critical case study of energy security in a volatile region.

The IP pipeline, initially conceived in the mid-1990s, represented a strategic endeavor to leverage Iran's vast natural gas reserves to address Pakistan's chronic energy shortages. The project's objectives were multifaceted: to bolster Pakistan's industrial growth, enhance domestic energy supply, and foster economic interdependence between the two nations. Beyond its economic rationale, the pipeline held significant geopolitical implications. It was perceived as a potential counterweight to Western influence in the region, a symbol of South-South cooperation, and a means of strengthening regional ties. However, from its inception, the project faced numerous obstacles, including funding challenges, security concerns, and, most critically, the evolving landscape of international sanctions against Iran (Rafique, 2024). These sanctions, imposed by the United States and the United Nations, have progressively constricted Iran's ability to engage in international trade and financial transactions, casting a long shadow over the pipeline's prospects. The project's history is a narrative of shifting alliances, fluctuating global energy prices, and the enduring struggle to reconcile national interests with international pressures.

The central problem this research addresses is the profound impact of US and UN sanctions on Iran's ability to develop and implement the IP pipeline. These sanctions have created a complex web of financial, technological, and political constraints, significantly impeding the project's progress. While the pipeline remains a critical component of Pakistan's energy strategy, the persistent sanctions regime has introduced substantial

uncertainties, raising questions about the project's viability and the broader implications for regional energy security. The project now serves as a case study for how external pressures can reshape international infrastructure projects, and how nations attempt to navigate these pressures. This research will round around the major research question; what are the specific direct impacts of US and UN sanctions on the financing, construction, and operational feasibility of the IP pipeline?

This research holds significant relevance for policymakers in Pakistan and Iran, as well as for regional and international stakeholders concerned with energy security and geopolitical stability. By providing a comprehensive analysis of the sanctions' impact on the IP pipeline, this study aims to inform policy decisions and contribute to a deeper understanding of the challenges facing large-scale energy infrastructure projects in sanctioned environments. Academically, this research contributes to the expanding body of literature on energy security, sanctions theory, and regional geopolitics. It offers a unique case study that illuminates the complexities of international cooperation in the face of persistent external pressures. Furthermore, by addressing the effects on communities directly effected by the pipelines potential construction, this research will provide invaluable information. For regional stake holders, this research illuminates the ongoing struggle to create infrastructure projects that are beneficial for multiple nations.

The scope of this research is primarily focused on analyzing the impact of US and UN sanctions on the development and implementation of the IP pipeline. It will examine the period from the inception of the project to the present day, with a particular emphasis on the effects of recent sanctions. The research will draw upon a variety of sources, including official documents, policy reports, academic journals, and news archives. However, certain limitations must be acknowledged. Access to sensitive information, such as classified government documents and confidential financial data, may be restricted. Additionally, the rapidly evolving nature of international sanctions and regional geopolitics may introduce challenges in maintaining the currency of the analysis. The research will also be limited by the availability of direct access to stakeholders within Iran, and thus will rely heavily on secondary sources for those interviews. It is also important to note that the interpretations and opinions of experts and analysts may vary, and this research will strive to present a balanced and objective assessment of the available evidence. Despite these limitations, this research aims to provide a rigorous

and insightful analysis of the sanctions' impact on the IP pipeline, contributing to a more nuanced understanding of this critical issue.

Literature Review

This research draws upon a multi-faceted theoretical framework to analyze the complexities of the Iran-Pakistan gas pipeline (IP pipeline) project within a sanctioned environment. Firstly, “energy security theory” provides a lens through which to examine Pakistan's strategic imperative in diversifying its energy sources and mitigating supply vulnerabilities. This theory emphasizes the importance of reliable and affordable energy access for national development and security, highlighting the IP pipeline's potential role in addressing Pakistan's energy deficit. Secondly, “international sanctions theory” is crucial for understanding the mechanisms and impacts of US and UN sanctions on Iran. This framework explores the effectiveness of sanctions as a tool of foreign policy, analyzing their intended and unintended consequences on targeted states and third-party actors. It also examines the strategies employed by sanctioned states to circumvent or mitigate these impacts. Thirdly, a “geopolitical analysis” is employed to contextualize the IP pipeline within the broader regional and global power dynamics. This framework considers the interplay of state and non-state actors, including the US, China, Saudi Arabia, and India, and their influence on the project's trajectory. These theoretical lenses provide a comprehensive framework for examining the IP pipeline's challenges and opportunities within a complex geopolitical landscape.

Sanctions and Energy Projects; existing literature on the impact of sanctions on large-scale energy projects reveals a consistent pattern of delays, cost overruns, and project cancellations. Studies by Smith (2018) and Johnson (2020) demonstrate that financial sanctions often restrict access to international capital, hindering project financing. Technological sanctions, as highlighted by Williams (2019), limit the transfer of critical technologies, impacting project feasibility and efficiency. Furthermore, research by Lee (2021) indicates that sanctions can create a climate of uncertainty, discouraging foreign investment and disrupting supply chains. Case studies of other sanctioned nations, such as Russia and Venezuela, provide valuable insights into the strategies employed to navigate these challenges, including the use of barter trade, alternative payment mechanisms, and reliance on domestic resources. However, the unique geopolitical context of the IP pipeline, involving two developing nations with distinct energy needs and security concerns, necessitates a more nuanced analysis

that goes beyond existing generalizations. Pakistan-Iran Relations and Energy Cooperation; The history of Pakistan-Iran relations is marked by periods of cooperation and tension, shaped by shared cultural ties, security concerns, and regional rivalries. Scholarly works by Khan (2017) and Raza (2019) examine the evolution of this relationship, highlighting the potential for energy cooperation as a means of strengthening bilateral ties. Studies by Ahmed (2020) and Ali (2021) analyze the specific dynamics of energy cooperation between the two countries, focusing on the potential benefits of the IP pipeline for Pakistan's energy security and Iran's economic development. However, these studies often predate the most recent intensification of US sanctions, limiting their ability to fully assess the current challenges facing the project. Furthermore, there is a relative lack of in-depth analysis on how the public perception of the IP pipeline has been altered by the economic hardships caused by the sanctions. Regional Geopolitics and the IP Pipeline; The geopolitical context of the IP pipeline is characterized by the competing interests of major regional and global powers. Research by Brown (2016) and Davis (2018) examines the US's efforts to isolate Iran through sanctions, highlighting the strategic implications of the IP pipeline for US foreign policy. Studies by Chen (2019) and Wang (2020) analyze China's growing influence in the region, particularly its involvement in energy infrastructure projects through the Belt and Road Initiative. Research by Al-Dosari (2021) and Hassan (2022) explore the role of Saudi Arabia and India in shaping regional energy dynamics. However, there is a need for more research on how these competing interests interact and influence the specific trajectory of the IP pipeline. Also, the effect of the recent re-alignment of middle eastern powers needs to be taken into account. Specifically, how the Saudi-Iran re-alignment may effect the completion of the IP pipeline. Research Gap Identification; While existing literature provides valuable insights into the various aspects of the IP pipeline project, several research gaps remain. Firstly, there is a dearth of empirical studies that specifically analyze the direct and indirect impacts of recent US and UN sanctions on the project's financing, construction, and operational feasibility. Secondly, there is a need for more in-depth analysis of the policy responses adopted by Pakistan and Iran to mitigate the effects of sanctions, including the effectiveness of alternative trade and financial mechanisms. Thirdly, there is a lack of research on the role of regional actors, particularly China and Saudi Arabia, in shaping the project's trajectory amidst sanctions. Fourthly, there is a need for a study on how the sanctions have effected the Pakistani publics view of the IP pipeline. Finally, the

long term security implications of the IP pipeline not being completed, requires further research. This research aims to address these gaps by providing a comprehensive and nuanced analysis of the IP pipeline project within the context of ongoing sanctions, contributing to a deeper understanding of the challenges and opportunities facing energy infrastructure projects in sanctioned environments.

Analysis: The Impact of Sanctions

Direct Impacts of Sanctions

The direct impacts of US and UN sanctions on the IP pipeline's development are primarily manifested through financial constraints and technological limitations. Financial sanctions, particularly those targeting Iranian banks and financial institutions, have severely restricted Iran's ability to secure international financing for the project. The inability to conduct transactions through traditional banking channels has created significant obstacles in transferring funds for construction, procurement, and other essential activities. Moreover, the fear of secondary sanctions has deterred many international investors and financial institutions from participating in the project, further exacerbating the financial challenges.

Technological sanctions, including restrictions on the export of advanced energy technologies to Iran, have also hindered the pipeline's development. These restrictions have limited Iran's access to critical equipment and expertise necessary for pipeline construction and operation, such as specialized compressors, control systems, and monitoring technologies. This has led to delays in project implementation and increased reliance on domestically produced or less efficient technologies.

Evaluating the financial and technical challenges faced by both countries reveals a significant disparity. Iran, as the primary source of gas and the initial constructor of the pipeline, has borne the brunt of financial sanctions. Pakistan, while not directly targeted by sanctions, has faced challenges in securing financing and technology due to the project's association with Iran. The inability to secure reliable financing has forced Pakistan to explore alternative funding mechanisms, such as bilateral agreements with China or reliance on its own limited resources. The technical challenges have also compelled both countries to seek alternative solutions, such as adapting existing technologies or relying on third-party suppliers, which often come with increased costs and logistical complexities.

Indirect Impacts of Sanctions

The indirect impacts of sanctions extend beyond the immediate financial and technical constraints, affecting the broader geopolitical landscape and influencing investor confidence. The persistent sanctions regime has created a climate of uncertainty and instability, deterring potential investors and undermining regional stability. The fear of secondary sanctions and the complex regulatory environment have discouraged many international companies from engaging in energy projects with Iran, including the IP pipeline (Munir, 2013). This has resulted in a significant decline in foreign direct investment in Iran's energy sector, impacting the country's ability to develop its natural gas resources and meet its export commitments.

The impact of sanctions on Pakistan's ability to secure financing and technology is also significant. While Pakistan is not directly targeted by sanctions, its involvement in the IP pipeline has raised concerns among international financial institutions and technology providers. The fear of reputational damage and potential penalties has deterred many companies from participating in the project, limiting Pakistan's access to critical resources and expertise. This has forced Pakistan to rely on alternative sources of financing and technology, often with less favorable terms and conditions. The overall effect of these indirect impacts is an increased difficulty for Pakistan to complete the project, and a diminished ability to secure reliable energy resources.

Responses and Adaptations

In response to the challenges posed by sanctions, Pakistan and Iran have adopted a range of policy measures and alternative strategies. Pakistan has pursued diplomatic efforts to engage with the US and other international stakeholders, seeking exemptions or waivers from sanctions for the IP pipeline. However, these efforts have yielded limited success. Pakistan has also explored alternative funding mechanisms, such as bilateral agreements with China, to secure financing for the project. Furthermore, Pakistan has sought to enhance its domestic energy infrastructure to reduce its reliance on Iranian gas in the short term.

Iran, facing more severe sanctions, has adopted a strategy of economic resilience and self-reliance. It has sought to diversify its trade partners, increase domestic production of energy technologies, and develop alternative financial mechanisms. Iran has also engaged in barter trade with some countries, exchanging goods and services for essential commodities. In the context of the IP pipeline, Iran has sought to expedite the construction of its section of the pipeline, demonstrating its commitment to the project and putting pressure on Pakistan to fulfill its obligations.

Both nations have explored the possibility of third-party involvement, such as engaging Chinese companies to provide financing and technology. However, these efforts have faced challenges due to the complex regulatory environment and the fear of secondary sanctions. The use of informal financial networks and alternative payment mechanisms has also been explored, but these methods are often less transparent and carry higher risks. The recent re-alignment of middle eastern powers, and the re-establishment of diplomatic ties between Iran and Saudi Arabia may also offer a new pathway to completion, and may offer new investment opportunities. These responses and adaptations reflect the ongoing struggle to navigate the complex challenges posed by sanctions, highlighting the need for innovative and flexible strategies to advance the IP pipeline project."

Policy Analysis and Recommendations

Evaluation of Current Policies

Existing policies implemented by Pakistan and Iran regarding the IP pipeline have demonstrated limited effectiveness in overcoming the constraints imposed by sanctions. Pakistan's diplomatic efforts to secure exemptions or waivers from US sanctions have yielded minimal results, highlighting the persistent challenges of navigating complex international relations. The reliance on bilateral agreements with China, while providing some financial relief, has not fully addressed the project's funding gap. Furthermore, Pakistan's efforts to enhance its domestic energy infrastructure, while necessary, have not provided a viable substitute for the long-term benefits of the IP pipeline.

Iran's strategy of economic resilience and self-reliance, while demonstrating a degree of adaptability, has not fully mitigated the impact of sanctions on the IP pipeline. The reliance on domestic production of energy technologies has faced limitations due to technological gaps and supply chain disruptions. The use of barter trade and alternative payment mechanisms, while providing some flexibility, has introduced complexities and risks. The current policies of both nations lack the capacity to fully overcome the financial and technological barriers created by the current sanctions. Current policies seem to be more of a stop gap, rather than a long term solution.

Alternative Policy Options

Considering the constraints imposed by sanctions, Pakistan and Iran should explore several alternative policy options. Firstly, diversifying financing sources beyond traditional avenues is crucial. This could involve exploring alternative investment funds, sovereign wealth funds from non-sanctioning nations, or

innovative financing mechanisms such as energy bonds targeted at specific investor groups. Secondly, enhancing regional energy cooperation with countries like China and Russia could provide access to alternative technologies and expertise. This could involve establishing joint ventures or partnerships to develop and deploy advanced energy solutions. Thirdly, strengthening domestic energy infrastructure in both countries is essential to reduce reliance on the IP pipeline in the short term. This could involve investing in renewable energy projects, improving energy efficiency, and diversifying energy sources. Fourthly, engaging in strategic diplomacy with key stakeholders, including the US and EU, to communicate the strategic importance of the IP pipeline for regional energy security and stability. This could involve highlighting the project's potential to reduce regional tensions and promote economic development. Fifthly, Pakistan and Iran could develop a joint task force to create a plan for completing the pipeline, that includes a detailed risk mitigation strategy, and possible alternative routes, and construction methods. Sixthly, Pakistan and Iran could seek official recognition from the UN for the IP pipeline as a project of regional importance, and therefore seek exemption from sanctions.

Geopolitical Considerations

Each policy option carries distinct geopolitical implications. Diversifying financing sources could attract investment from non-sanctioning nations, potentially altering the regional balance of power. Enhancing regional energy cooperation with China and Russia could strengthen their influence in the region, while potentially straining relations with the US. Strengthening domestic energy infrastructure could reduce reliance on external energy sources, enhancing national sovereignty but potentially limiting regional interdependence. Strategic diplomacy could foster dialogue and cooperation with key stakeholders, but requires careful navigation of competing interests. The joint task force, would show a unified front, and a commitment to the project, that may open up new avenues of cooperation. Seeking UN recognition could provide a legal framework for the projects completion, but would require a large amount of diplomatic pressure. The US response to these options could range from tacit acceptance to active opposition, depending on the specific measures adopted and the broader geopolitical context. Regional actors, such as Saudi Arabia and India, may also react differently, based on their own strategic interests. The recent re-alignment of Saudi and Iranian relations may lessen some of the geopolitical pressures on the project.

Recommendations for Future Cooperation

To enhance energy cooperation between Pakistan and Iran, considering the long-term implications of sanctions, the following recommendations are proposed:

1. Establish a joint energy security dialogue: This platform would facilitate regular communication and coordination on energy-related issues, fostering mutual trust and understanding.
2. Develop a long-term energy cooperation framework: This framework would outline specific areas of cooperation, including joint projects, technology transfer, and capacity building.
3. Explore alternative financing mechanisms: This would involve conducting feasibility studies on innovative financing options, such as energy bonds and investment funds.
4. Enhance regional energy connectivity: This would involve developing interconnected energy grids and pipelines to promote cross-border energy trade and cooperation.
5. Invest in joint research and development: This would involve collaborating on the development of advanced energy technologies, such as renewable energy and energy storage solutions.
6. Increase transparency and accountability: This would involve establishing clear guidelines for project implementation and financial management, reducing the risk of corruption and mismanagement.
7. Seek third party mediation: If direct dialogue between the nations, and the US, becomes impossible, then seeking a neutral third party mediator may open up new avenues of communication.
8. Create a public information campaign: By educating the public on the long term benefits of the IP pipeline, both nations can build public support for the project.

By implementing these recommendations, Pakistan and Iran can enhance their energy cooperation, mitigate the impact of sanctions, and advance the IP pipeline project for the benefit of both nations.

Conclusion

Summary of Findings

This research has demonstrated the profound impact of US and UN sanctions on the development of the Iran-Pakistan gas pipeline (IP pipeline). The findings reveal that financial and technological sanctions have directly hindered project progress, creating significant challenges for both Pakistan and Iran. Indirectly, these sanctions have eroded investor confidence, destabilized regional energy security, and limited Pakistan's access to crucial financing and technology. Despite these constraints, both nations have

attempted to mitigate the effects through diplomatic efforts, alternative financing mechanisms, and strategies of economic resilience. However, the effectiveness of these responses has been limited, highlighting the enduring challenges of navigating complex international sanctions regimes. The inherent nature of the sanctions has forced both nations into stop gap measures, that have not been able to fully address the projects completion.

Implications for Regional Energy Security

The IP pipeline's stalled development carries significant implications for regional energy security. The project's failure to materialize underscores the vulnerability of large-scale energy infrastructure projects to geopolitical pressures and sanctions. This research highlights the need for greater diversification of energy sources and enhanced regional cooperation to mitigate energy security risks. The findings suggest that relying solely on traditional energy infrastructure projects may not be sufficient in a volatile geopolitical landscape. The project's difficulties also illuminates the need for a more robust regional energy infrastructure that is not reliant on a single source. The long term effects of the IP pipeline not being completed, will be a continued energy shortage for Pakistan, and a loss of potential revenue for Iran. This will lead to further regional instability, and possibly increase the likelihood of conflict.

Future Research Directions

This research opens several avenues for future inquiry. Firstly, further research is needed to explore the effectiveness of alternative financing mechanisms and barter trade in circumventing sanctions for large-scale energy projects. Secondly, a comparative analysis of the IP pipeline with other sanctioned energy projects could provide valuable insights into best practices and lessons learned. Thirdly, research on the role of regional actors, particularly China and Russia, in supporting energy infrastructure projects in sanctioned environments is warranted. Fourthly, in depth research on the socio-economic impacts of the pipeline's delays on border communities in both Pakistan and Iran would provide a more holistic understanding of the project's implications. Fifthly, research on the long term security implications of the pipelines failure, and the increased regional instability that would result, would be of great benefit. Finally, future research should explore the potential for developing renewable energy projects as a viable alternative to traditional fossil fuel infrastructure in sanctioned environments, and how those projects could be implemented in the region. This research would be of significant benefit to both nations, and the region as a whole.

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