Khyber Journal of Public Policy

KJPP

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National Institute of Public Administration

National School of Public Policy

Contents

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Khyber Journal of Public Policy (KJPP)

A Quarterly Publication of the
National Institute of Public Administration, Peshawar
(A Constituent unit of National School of Public Policy)

About the Journal:

The journal's focus on original research papers, reflective studies, and analyses related to international relations, Pakistan affairs, and faith & society reflects a commitment to addressing critical issues and proposing viable solutions to these issues. By bringing together researchers, experts, and policy practitioners, the journal provides a platform for a diverse range of perspectives and experiences, allowing for a more comprehensive and nuanced understanding of complex issues.

The focus on public policy further underscores the journal's commitment to making a tangible impact on national and international issues. By providing a space for research and analysis, the journal helps to inform policymakers and practitioners, who can then use this information to develop more effective policies and programs. Additionally, the focus on viable solutions emphasizes the importance of actionable recommendations that can be implemented in the real world.

Overall, the journal's focus on research, analysis, and practical solutions reflects a commitment to advancing knowledge and making a positive impact in the fields of international relations, Pakistan affairs, and faith & society. By providing a platform for diverse perspectives and experiences, the journal contributes to a more comprehensive understanding of complex issues and the development of effective policies and programs.

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- Manuscript should be ideally around 5000 words;
- An abstract of about 150 words should be included;
- Five to six keywords should be provided;
- American English should be used;
- APA Manual of Style should be followed for Endnotes. In-text citations and bibliography are not required.;
- All the tables, charts, graphs and figures included in the manuscript should be in an editable, MS Word form.

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Message of the Capt. (Retd) Usman Gul,

Director General National Institute of Public Administration, Peshawar
on the eve of Inaugural Issue of the Khyber Journal of Public Policy:

I am delighted to announce the inaugural issue of the Khyber Journal of Public Policy, an initiative led by Dr. Muqeem, Chief Instructor of NIPA Peshawar and supported by Dr. Ijaz Munir, Rector NSPP. The journal covers social science and related concepts to significant political, economic, and social issues, exploring the ways in which public policies are made. Its articles deal with topics of concern to public policy scholars and practitioners alike, often cutting across disciplines such as environmental issues, international political economy, international relations, regulatory policy, and other critical issues facing Pakistan.

The Khyber Journal of Public Policy has been developed to provide a platform for policy researchers, academics, and practitioners to share their insights and solutions to critical challenges faced by the nation.

As Director General of the National Institute of Public Administration Peshawar, I am proud to support this initiative and congratulate Dr. Muqeem and his team for their efforts in bringing this journal to fruition. I encourage all concerned to contribute to the journal and engage in the ongoing dialogue surrounding public policy issues. With the support of esteemed researchers and practitioners, I am confident that the Khyber Journal of Public Policy will become a leading resource in the field.

Thank you and congratulations once again on this milestone achievement

Capt. (Retd) Usman Gul,
Director General
National Institute of Public
Administration, Peshawar

Preface
of the Special Issue of Khyber Journal of Public Policy

We are pleased to present the first issue of the Khyber Journal of Public Policy (KJPP), a publication of the National Institute of Public Administration (NIPA), National School of Public Policy (NSPP), Peshawar. The KJPP is a valuable addition to the existing publications on public policy, serving as a platform for dissemination of policy research outcomes by the officers who have undergone the intensive training courses at NSPP.

The mid-career and senior level officers from various organs of the government undertake these courses, focusing on all aspects of public policy, including the critical analysis of policy design, implementation, and impact. The officers' research outcomes propose viable solutions to the pressing issues faced by the country, and are thus of great value to practitioners, professionals, and academicians.

The KJPP aims to fulfill the intent of its act by providing a forum for disseminating these precious outcomes as a ready reference for practitioners and academia in the field of public policy. The journal follows the prescribed procedure of printing and publishing, as described by the Higher Education Commission (HEC), and we are confident that it will soon receive recognition from HEC and other concerned international agencies.

We extend our sincere gratitude to the authors who have contributed their research outcomes for the first issue of the KJPP. We hope that the KJPP will serve as an excellent source of knowledge and insights for public policy practitioners and academicians, enabling them to adopt and implement the policy recommendations and novel solutions to the crucial problems faced by the nation.

Dr. Muqeem Islam Soharwardy
PhD(Public Policy & Governance)
Editor ,
Khyber Journal of Public Policy

In this Issue

In the first paper author focuses on environmental issues of the Hind-o-Kush region. Hindu Kush Himalaya (HKH) provides essential resources and services to millions of people living downstream, but is being affected by unplanned land management, urbanization, and climate change. The buying and selling of land plays a significant role in land use patterns, which in turn affects the environment. To address these issues, the research suggests adopting a comprehensive approach to sustainable development projects in mountain regions of Gilgit Baltistan, with community participation. The study used a cause-and-effect method, analyzing available data to conclude that implementing a systematic land use policy can ensure sustainable development.

The second paper reviews the preferential trade agreement between turkey and Pakistan. Pakistan and Turkey have signed a Preferential Trade Agreement (PTA), strengthening their political and economic relations. The agreement is expected to have a positive impact on bilateral trade and domestic economic situation in both countries. However, potential issues and challenges need to be addressed, and recommendations have been made for optimizing the benefits of the PTA. The agreement reflects the cultural, religious, and historical ties between the two nations.

Third article highlights the emergence of digital diplomacy as an effective tool for diplomacy, with Pakistan's Ministry of Foreign Affairs recently incorporating it into its core functions. It covers the academic dimension of digital diplomacy and its integration with other tools by leading countries. The article also identifies the issues and challenges faced by Pakistan and makes recommendations to optimize the use of digital diplomacy.

Fourth study analyzes the factors responsible for Pakistan's dependence on imported edible oil, which has reached 92%. The lack of promotion of oilseed crops, liberal import policies, stagnant custom duties, and competition with major crops are among the factors. The study finds that minor crops like sunflower and canola are more profitable than major crops. India's vibrant import duties have helped protect local growers and meet 35% of their edible oil requirement from local production. Pakistan needs to encourage local production of oilseed crops to reduce dependence on imported oil, which is a serious threat to public health.

Fifth research paper focuses on the export of skilled, semi-skilled, and unskilled labor as a way for developing countries like Pakistan to address chronic problems like overpopulation, unemployment, low per capita income, and poverty. The study highlights the multifaceted market for labor exports and the contribution of foreign remittances to the growth of foreign reserves, which amounted to 31.2 billion USD in 2022. However, the research also identifies the challenges faced by Pakistan in the recruitment, placement, and exploitation of emigrants, as well as the smuggling of aspiring emigrants. The study aims to propose solutions to the gaps and weaknesses in the regulatory framework that give rise to illegalities and irregularities in the emigration structure, which could create distrust among overseas Pakistanis.

Last research paper of this issue highlights the challenges faced by Pakistan in addressing cybercrimes and the shortcomings of the Prevention of Electronic Crimes Act (PECA), 2016. The author argues that Pakistan needs to shift its policy orientation from being security-centric to citizen-centric, make amendments to PECA, and invest in capacity building of citizens and state agencies to effectively combat cybercrimes. The research emphasizes the need for a social contract between the state and citizens in the cyberworld, and the importance of indigenization of IT applications for socioeconomic empowerment. The author suggests that the state needs to exercise adequate control in the cyberworld while respecting digital rights.

Exploring the Underpinnings of Plea Bargaining: An In-Depth Policy Dimension Analysis

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Mr. Jehanzeb Khan Orakzai [2]

Abstract:

Plea bargaining (PB) is a legal process used to expedite the resolution of cases by allowing defendants to admit guilt in exchange for reduced sentences. In Pakistan, PB aims to address court backlogs and streamline justice. However, PB has notable drawbacks, such as potentially leading to disproportionately reduced sentences and encouraging repeat offenses. Additionally, PB can be biased, with not all defendants receiving equal opportunities for plea deals. This research evaluates both the benefits and drawbacks of PB, highlighting its potential to alleviate court delays and reduce costs while emphasizing the risks of unfair treatment and wrongful convictions. Recommendations include creating clear guidelines, enhancing transparency, providing training for legal professionals, reviewing sentencing criteria, and implementing technology for better monitoring. A comprehensive strategy is proposed to improve PB practices, ensuring justice is served fairly and effectively.

Key words:
Plea Bargaining, Legal System, Judicial Fairness, Case Backlog, Sentencing Reform

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Introduction

Plea bargaining (PB) can be an effective mechanism for quickly recovering stolen funds and resolving corruption cases. However, it comes with potential drawbacks. PB may lead to reduced sentences for individuals involved in corruption, which might seem disproportionate to the crimes committed. It could also incentivize individuals to engage in corrupt activities, knowing they might negotiate a favorable deal if apprehended. Additionally, selective prosecution or bias may occur, as not everyone may be offered the same PB deal. Therefore, it is crucial to evaluate both the advantages and disadvantages of PB to fully understand its implications.

Statement of the Problem

Plea bargaining in the National Accountability Bureau (NAB) is often viewed as an unethical recovery method in Pakistan. The Accountability Bureau's failure to effectively educate the public about the significance and details of plea bargains has led to widespread skepticism. The general public, who are key stakeholders in the accountability process, does not approve of plea bargaining as the sole means of recovery under NAB law. Therefore, it is essential to evaluate both the advantages and disadvantages of plea bargaining to gain a comprehensive understanding of its implications.

Research Methodology

This study employed qualitative, analytical, and descriptive research methods, gathering information from both primary and secondary sources. Primary sources included interviews with NAB prosecutors and officers, while secondary sources consisted of relevant laws, reports, policy documents from the government, articles, and other pertinent published material on the subject of policy gap analysis.

Scope of study

This qualitative research will focus on the economic impacts of global warming in Pakistan from 2010 to 2022 through available secondary data. It will primarily consider the sectors of agriculture, water resources, housing infrastructure, and disaster management. The geographical scope of the study will cover Pakistan as a whole, with a focus on regional disparities in climate impact. The study will not delve into the broader social or environmental aspects of climate change, nor will it confine the insight to specific events occurring during the study period. Instead, it will aim to provide an in-depth

analysis of the economic ramifications of global warming for Pakistan and propose policy recommendations.

Significance of Research

This research establishes a critical link with ongoing public policy debates surrounding climate change and economic development in Pakistan. It contributes by providing empirical evidence and comprehensive analysis to inform policy discussions, helping policymakers understand the economic consequences of global warming and guiding adaptation and mitigation strategies. This research holds significance in several aspects: It contributes to the growing body of knowledge on the economic impacts of global warming, particularly in the context of developing countries. It also provides policymakers with practical insights and policy recommendations to address the challenges posed by climate change. Furthermore, it serves as a foundation for future research on climate change and economic sustainability in Pakistan.

Literature review

Christopher Slobogin, in his article "Plea Bargaining and the Substantive and Procedural Goals of Criminal Justice: From Retribution and Adversarialism to Preventive Justice and Hybrid-Inquisitorialism," has explored various dimensions of plea bargaining.
Alvi, M. (2016) in his article "Plea Bargain: A Serious Issue, Says Rabbani," focused on the ethical concerns surrounding plea bargaining.
Butt, A. M. (2020, December 9) in his article "Efficacy and Potency of NAB's Plea Bargain" described the complexities involved in plea bargaining.
The NAB Annual Report for the year 2022 provides detailed information on recoveries made under different categories since the year 2000 and also outlines the trial status of NAB cases.

Dimensions of the Problem

There are two dimensions to plea bargaining: the legal dimension and the moral dimension.
The legal dimension of plea bargaining involves using legal processes to reduce or eliminate criminal charges against an accused in exchange for cooperation, such as providing evidence or testimony against other criminals. Legally, plea bargaining helps to reduce the cost of judicial proceedings while achieving a higher conviction rate of criminals.
Conversely, the moral dimension of plea bargaining addresses the ethical implications of the practice. Morally, plea bargaining may undermine principles of justice, fairness, and proportionality of punishment.

Additionally, it could incentivize individuals to commit crimes, knowing they might receive reduced sentences in exchange for cooperation (Alvi, 2016).

Analysis of Present Situation

As the apex anti-corruption agency of Pakistan, NAB is tasked with eliminating corruption through a comprehensive approach involving awareness, prevention, and enforcement. The preamble of NAB states that the agency is also responsible for recovering looted amounts. NAB can recover amounts from accused individuals through several methods: a. Plea Bargain b. Voluntary Return c. Indirect Recoveries d. Recoveries in Convictions through Court Fines

The updated status of prosecution of cases in trial courts is as follows:

Sr.#	Particulars / Breakup		NAB (L)	NAB (K)	NAB (KP)	NAB (B)	NAB (R)	NAB (M)	NAB (Sk)	Total
1	References filed u/s 18(g) of NAO, 1999 (References contains carry forward / balance cases upgraded from Investigation)		4	7	2	6	3	4	4	30
2	Decided (Sr.3&4) (including previous cases)		22	15	4	11	8	13	5	78
3	Convictions u/s 10 of NAO, 1999		3	6	0	4	4	4	4	25
4	Acquittal		19	9	4	7	4	9	1	53
5	Plea Bargain (cases sent for trial	PB & Disposed off[1]	0	7	0	0	1	0	0	8
6		Individual PB; cases pending[2]	0	10	0	0	0	0	22	32
7	PB (under investigation matters, PBs approved by Court[3])		6	9	0	0	2	31	0	48
8	Closed u/s 9(c) of NAO, 1999		1	0	0	0	0	2	0	3
9	Withdrawn u/s 31B		0	0	0	1	0	0	0	1
10	Quashed/Terminated		0	3	0	0	0	0	0	3
11	Abated		1	0	0	0	0	0	1	2
12	Merged		0	1	0	0	0	0	0	1
13	Transfer		0	8	0	0	0	0	0	8
	Total cases decided[4] (including previous cases)		23	34	4	12	9	13	6	101
14	Return back to NAB*		94	10	141	57	96	67	4	469

Plea Bargain

Recoveries under plea bargaining are considered convictions under the law. The implications of plea bargaining have been discussed in preceding sections. All amounts recovered through plea bargaining are direct recoveries for NAB and are returned to the respective government, whether Federal or Provincial. It is important to note that the accused must deposit the full amount of the loss caused to the exchequer.

Voluntary Return

Since its inception, NAB has recovered substantial amounts through voluntary return (VR). VR was typically used in cases where the evidence was weak, and the likelihood of success in Accountability Courts was low. Critics argued that VR might encourage corrupt elements to reoffend in the future, as it imposed no significant consequences on the accused. In 2016, the Supreme Court of Pakistan invalidated the Voluntary Return section, i.e., Section 25(a), in Suo Moto Case No. 17 of 2016. The exclusion of VR has notably impacted NAB's recoveries, as accused persons now avoid plea

bargaining due to the severe implications of Section 25(b) of NAO. It is important to mention that the accused must deposit the full amount of the loss caused to the exchequer.

Indirect Recoveries

Indirect recoveries refer to the amounts recovered by NAB where the accused are required to compensate the loss caused to the exchequer by depositing funds with the respective departments.

Court Fine Recovery

Court fines are imposed after the conclusion of a trial. The court fines the accused based on the loss caused and substantiated by NAB during the trial.

International Legal & Policy Framework

Plea Bargaining in Australia, Canada, New Zealand, England, and the United States

Plea bargaining in Australia is an informal process where the prosecuting authority and defense counsel negotiate charges and/or concessions related to sentencing. The aim is to reach a mutually acceptable agreement for the defendant to plead guilty.

In England and Wales, there is no formal process for plea bargaining. Prosecutors are generally not permitted to address the court on sentencing issues, which remain within the court's discretion. The Crown Prosecution Service (CPS) typically selects the charge, allowing for negotiations between counsel, with the CPS handling these discussions.

New Zealand lacks a formalized plea bargaining system. Prosecutors may be open to reducing charges after discussions with defense counsel, though this often depends on judicial style. Plea bargaining is carried out informally with no structured framework.

The United States has an extensive formal plea bargaining system, where the majority of criminal cases are resolved through this method. Plea bargaining can be structured with judicial oversight or occur privately between the prosecution and defense. The process is governed by a comprehensive set of procedural rules and has become institutionalized across the country.

Plea Bargain in the United States

Plea bargaining and guilty pleas are often viewed as incompatible with the foundational principles of American criminal justice. Plea bargaining frequently leads to punishments that are disproportionate to the severity of the crime, and guilty pleas can undermine procedural due process. To reconcile plea bargaining with the principles of criminal justice, it would require a fundamental shift in these principles. This would involve moving away from retribution as the primary focus of punishment and adopting a system where adjudication is more judicially supervised rather than adversarial.

The rationale behind plea bargaining is understandable, given the harsh sentences defendants face if they go to trial. This risk makes them more likely to plead guilty to obtain a reduced sentence, helping to avoid potentially lengthy and counterproductive incarceration. Additionally, trials can be

taxing for both judges and jurors; therefore, plea bargaining can expedite the process by allowing the defendant to admit guilt and thus provide immediate information about culpability.

However, even if retributive justice can be adjusted to work with plea bargaining, it acknowledges that desert—punishment proportional to the crime—is only one consideration among many. The practical reality is that most criminal cases are resolved through plea deals that do not align with individualized retribution, making proportionality a theoretical rather than practical goal. Some argue that judges could be trained to determine a just sentence if given access to relevant expert testimony. Nevertheless, it remains challenging to establish consistent and predictable patterns in sentencing.

Drug courts could serve as a model for integrating inquisitorial methods into plea bargaining. This would involve constraining the types of settlements possible and ensuring that they fit within a broader sentencing scheme focused on prevention rather than retribution. Although inquisitorial systems have their own issues, their potential benefits make them worth exploring, particularly given their relative success in Europe and their historical connection to American legal traditions.

Plea Bargain under Section 25(b) of the NAO, 1999

"Where, at any time after the authorization of an investigation, before or after the commencement of the trial or during the pendency of an appeal, the accused offers to return to NAB the assets or gains acquired through or as a consequence of any offense under this Ordinance, the Chairman, NAB, may, at his discretion, accept the offer after considering the facts and circumstances of the case. If the accused agrees to return the amount determined by the Chairman, NAB, the Chairman shall refer the case for approval by the Court or Appellate Court and for the release of the accused."

Implications of Plea Bargain as Per Section 15 of NAO, 1999

15. (a) Where an accused person is convicted of an offense under section 9 of this Ordinance, they shall immediately cease to hold any public office and shall be disqualified for a period of ten years, starting from the date of release after serving the sentence, from seeking or being elected, chosen, appointed, or nominated as a member or representative of any public body, statutory or local authority, or in the service of Pakistan or any Province.

Provided that any accused person who has availed the benefit of subsection (b) of section 25 shall also be deemed to have been convicted of an offense under this Ordinance. They shall immediately cease to hold any public office and shall be disqualified for a period of ten years, starting from the date they have discharged their liabilities related to the matter or transaction in question, from seeking or being elected, chosen, appointed, or nominated as a member or representative of any public body, statutory or local authority, or in the service of Pakistan or any Province.

SWOT Analysis

Strengths	Weaknesses
• Saves time and money for the criminal justice system • Can result in a faster resolution and closure for everyone involved • Allows prosecutors to focus on more serious cases • Results in a guaranteed outcome and saves resources that would be used for a trial	• Could lead to innocent people pleading guilty to avoid a harsher sentence at trial • May incentivize police and prosecutors to overly charge defendants – • Can contribute to systemic inequality in the justice system as marginalized and low- income individuals may be pressured to take plea deals • Can result in unreasonably lenient or harsh sentences that do not reflect the severity of the crime
Opportunities	Threats
• Provides an avenue to clear court congestion and reduce backlog - Can be used to encourage individuals to cooperate with law enforcement, as seen in exchange for information related to other crimes • Can be used to ensure that punishment is equally distributed, regardless of social status or background • Can be used to help address the high costs and inefficiencies of the justice system	• Can result in wrongful convictions if defendants plead guilty despite being innocent • Can perpetuate systemic injustice by placing uneven pressures on different socio- economic groups • Can create an imbalance of power between prosecutors and defense attorneys when defendants are not sufficiently educated about their legal rights • Can incentivize plea deals even in difficult cases, leading to an incorrect outcome due to a lack of legally sound evidence being presented.

Conclusion

Plea bargaining is a practice in Pakistan, as in many other countries, that allows defendants to admit to crimes in exchange for reduced sentences. While this practice has its advantages, it also raises significant concerns about fairness and justice within the legal system.

Advantages of plea bargaining in Pakistan include the potential reduction of

court case backlogs and the alleviation of delays in justice. By facilitating quicker resolutions, plea bargaining can reduce the number of cases that require lengthy trials, thereby saving time and resources in the legal system. However, disadvantages must also be considered. There is a risk that innocent defendants might plead guilty to avoid harsher penalties, and marginalized or low-income individuals might be pressured into accepting plea deals despite their innocence. These issues could lead to inequities and undermine the fairness of the justice system.

Therefore, while plea bargaining can be an effective tool for managing case volumes and reducing costs in Pakistan's courts, it is essential to implement careful regulation to mitigate its potential drawbacks. Ensuring that plea bargaining does not lead to unjust outcomes or unfair treatment is crucial. A thorough evaluation of its benefits and limitations is necessary to uphold the integrity of the legal system and ensure that justice is served fairly for all parties involved.

GAP Analysis

Aspect	Desired Situation	Existing Situation	Gap	Recommendations
Effective **Recovery of Embezzled Funds**	The plea bargain system should effectively recover embezzled funds.	The recovery through PB doesn't commensurate with the corruption level in the country,	Recovery is less than the desired level.	• Effective detection of corruption. • Whistleblower policy. • Efficient investigation.
Transparent and Fair Process	The plea bargain process should be transparent, fair, and in accordance with the rule of law.	Misconceptions about PB in the general public. Lack of transparency and disclosure.	The process of PB in not transparent.	• Clear policy outlines. • Public disclosure of PB cases. • Public awareness regarding PB.

Deterrence of Corruption	The plea bargain system should contribute to deterring corruption.	Pakistan corruption index has deteriorated over the past years.	NAB has not been able to create desired deterrence against corruption.	• Make corruption costlier than the benefits. • Advertise achievement against corruption. • Create deterrence through internal control and effective detection of corruption.
Cooperation in Investigations	Individuals entering into plea bargains should provide valuable information.	Plea Bargain does not fetch the desired evidence in investigation.	Gap in cooperation by individuals entering into plea bargain.	• Amendments in law to make person entering PB as a competent witness. • Mare recovery of funds should not be the objective of PB. • Full disclosure of information and evidence mandatory for PB.

Recommendations

1. **Create Clear Guidelines**: The Pakistani government must develop clear guidelines regarding plea bargaining to prevent judicial misconduct and abuse of power. The guidelines should focus on regulating the practice by preventing discrimination against certain classes of defendants and ensuring that the rules apply to all hearings in the court system.
2. **Train Counsel**: Lawyers and judges should receive adequate training to manage plea bargaining effectively. They should possess the skills and knowledge needed to ensure that plea bargaining is conducted fairly and ethically, and that defendants are not subjected to undue pressure.
3. **Ensure Greater Transparency**: Pakistan's policy on plea bargaining should be more transparent about the deals made between prosecutors and defendants. This will help guarantee that both the

defendant and the court are aware of the agreed terms. There should be a detailed explanation of the conditions, terms, and any consequences if one party breaches the deal.

4. **Review the Sentencing Regime**: Pakistani courts must review the current sentencing criteria. If the punishment for lesser offenses is lenient, it may discourage plea bargaining. Lawmakers should consider introducing minimum and maximum sentencing guidelines. The goal should be to design a program that encourages individuals to plead guilty while maintaining a proper balance for justice and crime prevention.

5. **Implement Technology**: To regulate plea bargaining effectively, technology should be introduced to track the process from start to finish. Digitally collected data should be integrated with criminal tracking systems to monitor transactions and detect any misconduct or malicious behavior by the parties involved.

6. **Overall Strategy**: These recommendations reflect the need to adjust the current Pakistani system to maintain the integrity of the judiciary. By creating a clear system with rules, technology, and training, along with transparency and sentencing regulation, plea bargaining in Pakistan can address the backlog of cases while ensuring that justice is served impartially.

Policy Recommendations:
Clear Guidelines and Regulations:
Objective: Establish clear guidelines and regulations for plea bargaining in Pakistan.

Rationale: To prevent judicial misconduct, abuse of power, and ensure fair and consistent application of plea bargaining across all court hearings.

Implementation:

- o Form a committee to draft comprehensive guidelines.
- o Involve legal experts, representatives from the judiciary, and other stakeholders.
- o Publish and disseminate the guidelines widely.

Training Programs for Legal Professionals:
Objective: Provide training for lawyers and judges to enhance their understanding of and competence in managing plea bargaining processes.

Rationale: To ensure that legal professionals handle plea bargaining ethically and fairly.

Implementation:

- o Develop training modules in collaboration with legal institutions.
- o Conduct regular workshops and seminars.
- o Include case studies to illustrate best practices.

Enhanced Transparency Measures:

Objective: Improve transparency in the plea bargaining process.
Rationale: To dispel misconceptions and ensure public confidence.
Implementation:

- o Require public disclosure of plea bargain cases.
- o Establish a system for reporting and monitoring plea bargains.
- o Conduct public awareness campaigns to educate the public about the plea bargaining process.

Review and Amendment of Sentencing Regime:

Objective: Review the current sentencing criteria and amend as necessary.
Rationale: To ensure that punishments are proportionate to offenses and encourage defendants to consider plea bargains.
Implementation:

- o Form a sentencing review committee.
- o Analyze the impact of existing sentencing guidelines.
- o Propose amendments for a more balanced approach.

Technological Integration:

Objective: Implement technology to streamline and monitor the plea bargaining process.
Rationale: To enhance efficiency, transparency, and accountability.
Implementation:

- o Introduce a digital tracking system for plea bargains.
- o Use technology to document and store plea bargain details securely.
- o Ensure accessibility and monitoring by relevant authorities.

Recommended Option for Implementation:

Considering the multifaceted nature of the issue, a comprehensive approach that incorporates **Clear Guidelines and Regulations (Option 1)** is recommended as the primary strategy. Clear guidelines lay the foundation for fair and consistent plea bargaining practices. Once established, these

guidelines can serve as a basis for other recommendations, such as training programs, transparency measures, and technological integration.

Implementation Strategy:
Establish a Committee:

Form a committee comprising legal experts, representatives from the judiciary, and other stakeholders. This committee will be tasked with drafting comprehensive guidelines for plea bargaining.

Public Consultation:

- Conduct consultations with legal professionals, civil society, and the public.
- Gather input on the draft guidelines to ensure a comprehensive and inclusive framework.

Publication and Training:

- Publish the finalized guidelines and make them widely accessible.
- Initiate training programs for legal professionals based on the new guidelines.

Monitoring Mechanism:

- Implement a monitoring system to ensure adherence to the guidelines.
- Utilize technology to track and document plea bargaining cases.

Continuous Evaluation:

- Periodically evaluate the effectiveness of the guidelines.
- Make necessary adjustments based on feedback and evolving legal practices.

By adopting this comprehensive approach, Pakistan can enhance the integrity and fairness of its plea bargaining system, addressing the identified gaps and contributing to a more transparent and accountable legal process.

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Enhancing National AI Policy: An inclusive approach for Pakistan's Defence Manufacturing Sector

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Disclaimer:

Abstract:

Artificial Intelligence (AI) is reshaping various sectors, including healthcare, finance, logistics, and education, by enhancing data analysis and decision-making capabilities. Its transformative potential has prompted global recognition and policy development to harness its benefits. In the defense manufacturing sector, AI applications promise advancements in weapon systems, military robotics, logistics, and command and control, offering increased precision, efficiency, and reduced risks. This paper critiques Pakistan's National AI Policy draft, advocating for its extension to include defense manufacturing. By addressing policy gaps and integrating global best practices, the paper aims to ensure that Pakistan's AI strategy fosters innovation while enhancing national security. Effective policy revisions will bolster Pakistan's defense capabilities and position it strategically in the international AI landscape.

Key words:

Artificial Intelligence, Defense Manufacturing, National AI Policy, Policy Gaps, Technological Advancement

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Introduction

Artificial intelligence (AI) has been a groundbreaking technology that has had far-reaching effects on society. It spans across the areas of healthcare, banking, logistics, and education (OECD, 2019). AI's ability to analyze large data sets, draw conclusions, and make sound decisions could spark a revolutionary change in how we live and work. The revolutionary capacity of AI is what has made countries around the globe recognize its importance and the different policies they have developed to ensure its effectiveness. AI's extraordinary ability to analyze vast amounts of information, comprehend it, and reach intelligent conclusions can transform how we live and work. This transformational ability has, in recent years, persuaded states worldwide to develop AI-oriented policies aimed at unleashing the full potential of the technology (Floridi, 2019).

One dominant theme revolves around having effective and far-sighted laws that encompass various dimensions, ranging from civil to military use cases and aspects of security concerns. This reveals that AI could be used for either peaceful or destructive purposes; therefore, policymakers must strike a delicate balance between promoting innovations and ensuring responsible applications in sensitive fields (Davenport & Harris, 2017). The defense manufacturing industry plays the most important role in this complex political situation. These functions include conducting research, developing sophisticated weapons, and modern communications gear. The country's self-reliance and security have always been closely associated with the capability of the defense industrial sector. This will lead to a new era, where military operations will be conducted using more precise systems, autonomous machines, and improved efficiencies based on AI (Arulkumaran et al., 2017).

AI's application in the defense manufacturing sector is multifaceted, and its potential benefits are far-reaching. In many ways, the use of AI-driven technologies is relevant for defense manufacturing:

Weapon Systems: AI may help make weapons more targeted, guided, and precise, thereby increasing their effectiveness and reducing the incidence of civilian casualties.

Military Robotics: Robots and unmanned vehicles using machine intelligence will further improve reconnaissance, surveillance, and fighting while reducing risks for soldiers.

Logistics and Supply Chain: AI can enhance logistics by meeting the needs for specific supplies and minimizing operational risks in military

detachments.

Command and Control: Military leaders may use AI to support their situational awareness and enable quick and intelligent reactions within a high-risk environment.

The integration of AI into the defense manufacturing sector is not confined to Pakistan; it is a global trend. Nations worldwide are channeling significant investments into AI research and development to maintain a technological edge in national defense. Therefore, it is imperative for Pakistan to adopt a holistic perspective and consider the defense manufacturing sector as an integral component of its AI policy framework (Ministry of Information Technology & Telecommunication Pakistan, 2023).

This policy paper seeks to address this necessity by critically examining Pakistan's National AI Policy draft and advocating for its expansion to include the defense manufacturing sector. By doing so, Pakistan can ensure that its AI policy is all-encompassing, seamlessly integrating both civilian and defense applications. This inclusive approach not only fosters innovation and growth but also fortifies national security and defense capabilities, aligning Pakistan with global advancements in AI technology. Additionally, this policy paper will delve into responsible and ethical considerations in AI use for defense, drawing from international best practices and case studies to provide a comprehensive roadmap for policymakers and stakeholders as they navigate the evolving landscape of AI within the defense context (Nazeer & Gil, 2023).

Problem Statement

Pakistan's Ministry of Information Technology & Telecommunication (MoITT) floated a consultative draft of the country's first National Artificial Intelligence Policy in May 2023. Like other emerging technologies, Artificial Intelligence (AI) is a dual-use technology with wider applications in the military domain, ranging from its integration with existing weapon systems to the development of a new generation of complex military robots. AI will revolutionize warfare by making it faster, smarter, and more autonomous. Considering the ever-growing spectrum of its applications, there is a need to critically analyze the AI policy draft with a view to making it comprehensive and inclusive of the defense manufacturing sector in Pakistan.

Literature Review

Introduction

Artificial Intelligence (AI) has emerged as a groundbreaking technology with profound implications across various sectors of society. In this document review, we delve into the multifaceted landscape of AI, assessing its contemporary significance and relevance. We will explore its evolution over time, core technologies and methodologies, influence across industries, ethical and regulatory considerations, challenges, prominent contributors and initiatives, current adoption patterns, and prospects for its future. This comprehensive examination will provide essential insights into AI's role in shaping the present and future of our world (Sumra Kalsoom B. & Alam, 2022).

The Evolution of AI Over Time

This section narrates the story of how AI has evolved from its inception to its current state. We will review the critical milestones and accomplishments in the history of AI research, placing them in their historical context as a backdrop for the revolutionary transformations attributed to AI (Bokhari & Myeong, 2023).

Core Technologies and Methodologies in AI

This section explores foundational technologies and methodologies behind AI, such as machine learning, neural networks, natural language processing, and computer vision. Understanding these basic aspects allows us to grasp how artificial intelligence will be applied in real life and why it is so crucial.

AI's Influence Across Industries

AI is having a broad impact on nearly every facet of life, including health, finance, production, and transportation. Therefore, we will provide specific instances where AI is applied in these industries, demonstrating its practical applications (Ajmal et al., 2021).

Ethical and Regulatory Dimensions of AI

Ethical concerns about artificial intelligence often revolve around bias, data breaches, and job displacement. This section addresses these concerns and discusses the imperative for establishing regulatory frameworks and ethical guidelines to govern AI development and deployment, ensuring responsible use (Kanwal et al., 2022).

Overcoming Challenges and Recognizing Limitations

While AI offers immense potential, it also comes with obstacles and constraints, such as data quality, interpretability, and security. Ongoing research and initiatives aimed at overcoming these challenges are explored, offering a balanced perspective on AI's capabilities and limitations.

Prominent Contributors and Initiatives in AI

The AI landscape is characterized by leading research institutions, organizations, and enterprises. This section highlights these prominent contributors and recent advancements and breakthroughs emerging from AI research endeavors, showcasing the dynamic nature of the field.

Current Patterns in AI Adoption

Data-driven insights and prevailing trends concerning the integration of AI by businesses and governmental entities are presented here. An analysis of the driving forces behind the growing adoption of AI provides a current snapshot of AI's impact on various sectors.

Prospecting the Future of AI

Speculating on the future of AI is essential to understand its transformative potential. This section envisions potential advancements, applications, and challenges, contemplating the role of AI in shaping society and the global economy. It provides a forward-looking perspective on the continued evolution of AI and its impact on our world (Dwivedi et al., 2021).

Policy Gap Analysis

In conducting a comprehensive analysis of the National Artificial Intelligence (AI) Policy in the context of the defense manufacturing sector, several crucial aspects merit detailed exploration to identify potential gaps and areas for improvement.

Current State of AI Integration in Defense Manufacturing in Pakistan

To gain a nuanced understanding of the AI landscape within the defense manufacturing sector, a detailed examination of the current state of research, development, and application in Pakistan is imperative. This involves assessing the level of awareness and expertise within the defense manufacturing industry regarding AI technologies. By delving into these specifics, we can uncover existing strengths and pinpoint areas that require targeted attention in the policy framework.

Review of the National AI Policy Framework

Scrutinizing the National AI Policy with respect to our defense sector capabilities is a critical step to determine its suitability for addressing the unique challenges and opportunities within the defense manufacturing sector. This involves a thorough analysis of the policy's scope, objectives, and emphasis, focusing on understanding its alignment with the distinctive requirements of defense manufacturing applications. This assessment of coverage and relevance will inform subsequent recommendations for policy refinement.

Comparison with International Best Practices

Benchmarking the National AI Policy against international best practices is essential for drawing insights from successful strategies employed by countries with advanced AI capabilities in defense manufacturing. Analyzing relevant case studies provides a contextual understanding of effective approaches and potential adaptations that can enhance the policy's effectiveness within the Pakistani context.

Financial Support

The National AI Policy draft lacks emphasis on incorporating AI in defense manufacturing. To maintain deterrence, it is imperative that Pakistan increase its budget and invest more in enhancing the lethality of weapons, underwater defense systems, and air force stealth technology.

Legal and Regulatory Landscape

An examination of the legal and regulatory frameworks governing AI applications in defense manufacturing is vital. Revised regulations will shed light on potential obstacles that may hinder the responsible and ethical deployment of AI technologies. Addressing this aspect is essential for ensuring compliance, ethical use, and legal clarity within the defense manufacturing sector.

Technical Infrastructure and Readiness

Assessing the technical readiness for AI integration in defense manufacturing involves evaluating the existing infrastructure, data capabilities, and interoperability within the sector. Identifying technical constraints that may impede successful implementation is crucial for tailoring the policy to address specific technological needs and ensuring a seamless integration of AI technologies.

Economic Implications

An in-depth assessment of the economic implications of the National AI Policy on the defense manufacturing sector is necessary. This includes evaluating investment incentives, funding mechanisms, and economic sustainability within the sector. Identifying gaps in these economic considerations will inform strategies to bolster growth and competitiveness in the evolving landscape of AI-driven defense technologies.

Educational and Skill Development Programs

Investigating the educational and skill development initiatives outlined in the National AI Policy, specifically tailored for the defense manufacturing workforce, is essential. Focusing on deficiencies in these programs ensures that the sector has the requisite human capital equipped to harness AI technologies effectively, fostering innovation and competitiveness.

Ethical and Social Considerations

Scrutinizing the ethical considerations addressed in the National AI Policy, particularly within the context of defense manufacturing, is crucial. Addressing the ethical and social implications ensures the responsible and ethical use of AI technologies in defense applications, addressing concerns related to bias, privacy, and societal impact.

Implementation Perspective
Developing an Actionable Implementation Plan

Formulating an actionable implementation plan involves creating a detailed roadmap for adjusting and expanding the National AI Policy to address identified gaps. This includes specifying timelines, responsible entities, and estimated budget requirements for each proposed recommendation, ensuring practical and feasible steps toward policy enhancement.

Establishing Key Performance Indicators (KPIs)

Defining measurable KPIs is essential for assessing the success and impact of the policy adjustments. These indicators provide a quantifiable means to gauge progress and ensure that the objectives are met effectively, contributing to the overall success of the policy.

Monitoring and Adaptation Mechanisms
Constructing a Comprehensive Monitoring and Evaluation Framework

Developing a robust framework for monitoring and evaluating the progress of policy implementation involves establishing systematic assessment criteria. This encompasses regular evaluations of AI integration in defense manufacturing, allowing for ongoing adjustments and refinements based on real-time insights and evolving needs.

Specifying Periodic Review and Adjustment Mechanisms

Outlining mechanisms for periodic reviews ensures the adaptability of the AI policy to evolving trends and technological advancements in defense manufacturing and AI applications. This proactive approach enables timely adjustments, maintaining the policy's relevance and effectiveness in the dynamic landscape of AI technologies.

Analytical Techniques Employed
SWOT Analysis

The SWOT analysis for Pakistan's draft National Artificial Intelligence Policy reveals a multifaceted landscape. The policy's strengths lie in its strategic importance, symbolizing the country's acknowledgment of the transformative potential of AI. The interdisciplinary collaboration implied by the policy could foster a holistic approach. Furthermore, the policy opens doors for innovation and technological advancements, positioning Pakistan competitively on the global stage. However, weaknesses such as a potential lack of expertise and resource constraints may pose challenges to effective implementation. Regulatory hurdles and resistance from traditional defense manufacturing practices add to the complexity. On the flip side, the policy presents opportunities for defense modernization, international collaboration, economic growth, and research and development. Yet, security concerns and ethical dilemmas, coupled with global competition and geopolitical dynamics, stand as formidable threats. A nuanced approach that leverages strengths, mitigates weaknesses, capitalizes on opportunities, and addresses threats is crucial for formulating a robust and inclusive National Artificial Intelligence Policy in Pakistan, especially in the context of defense manufacturing.

Strengths:

- **Strategic Importance:** The development of a National Artificial Intelligence Policy reflects Pakistan's recognition of the strategic importance of AI.

- **Interdisciplinary Collaboration:** If the policy involves collaboration across different government departments, it could lead to a holistic approach.
- **Potential for Innovation:** AI integration in defense manufacturing could foster innovation and technological advancements in the sector.
- **Global Competitiveness:** Implementing a robust AI policy could enhance Pakistan's global competitiveness in the rapidly evolving field of AI.

Weaknesses:

- **Lack of Expertise:** The country may face a shortage of AI experts and professionals, impacting the effective implementation of the policy.
- **Resource Constraints:** Limited financial and technological resources may hinder the development and execution of AI initiatives, especially in the defense sector.
- **Regulatory Challenges:** Developing regulations for the dual-use nature of AI may pose challenges, especially in aligning with existing legal frameworks.
- **Potential Resistance:** There might be resistance from traditional defense manufacturing processes or stakeholders not fully embracing AI technologies.

Opportunities:

- **Defense Modernization:** AI integration can lead to the modernization of defense capabilities, including the development of advanced military technologies.
- **International Collaboration:** Opportunities for collaboration with other countries and international organizations on AI development and defense applications.
- **Economic Growth:** A thriving AI sector in defense could contribute to economic growth and job creation in Pakistan.
- **Research and Development:** The policy can encourage investment in AI research and development, fostering a culture of innovation in defense manufacturing.

Threats:

- **Security Concerns:** The militarization of AI raises security concerns, and the policy must address potential risks and vulnerabilities.
- **Ethical Dilemmas:** The autonomous nature of AI in military applications may pose ethical dilemmas, requiring careful consideration and guidelines.
- **Global Competition:** Intense global competition in AI and defense technologies may pose a threat if Pakistan falls behind in innovation.

- **Geopolitical Dynamics:** Political tensions and international relations could impact collaboration and technology transfer in the field of AI.

Issues/Challenges/Analysis

In the pursuit of enhancing the National AI Policy to encompass the defense manufacturing sector in Pakistan, a meticulous analysis of various critical aspects is imperative. This comprehensive examination will delve into specific details relevant to the defense industry, considering the unique challenges and opportunities associated with the integration of artificial intelligence (AI) technologies.

Industry Pioneers

In scrutinizing the involvement of established industry pioneers within the defense manufacturing sector, a focus will be placed on understanding their current technological capabilities, ongoing AI initiatives, and strategic roadmaps. Insights from industry leaders will provide a nuanced perspective on the challenges they face in adopting AI, ranging from technological barriers to market dynamics. This analysis will inform policy recommendations that not only address industry challenges but also leverage the sector's expertise for collaborative innovation.

Startups and Centers of Innovation

An in-depth analysis of startups and innovation centers within the AI domain, with a specific emphasis on their relevance to defense manufacturing, will be conducted. This includes evaluating their technological innovations, existing collaborations, and potential contributions to the defense sector. Policymakers will explore avenues for fostering partnerships and creating an enabling environment for startups to thrive, ensuring a diverse and dynamic ecosystem.

Government Initiatives

The examination of government initiatives will extend beyond a cursory review to an in-depth assessment of their impact on defense manufacturing. This involves analyzing the alignment of existing policies with the specific needs of the defense industry, evaluating the effectiveness of financial incentives, and identifying areas for targeted support. The goal is to refine and enhance existing initiatives to better facilitate AI integration within the defense manufacturing sector.

Ethical and Regulatory Considerations

Given the sensitive nature of defense applications, ethical and regulatory considerations will be scrutinized in detail. This involves a thorough analysis of the ethical implications of AI technologies in defense manufacturing, along with an assessment of the existing regulatory frameworks. Policymakers will explore ways to strike a balance between innovation and ethical standards, ensuring responsible AI deployment within the defense sector.

AI Applications in Defense Manufacturing

A granular analysis of AI applications within the defense manufacturing sector will be conducted. This involves a detailed examination of use cases such as autonomous weapon systems, predictive maintenance, and AI-driven logistics. Policymakers will identify specific challenges and opportunities associated with each application, guiding the development of policies tailored to the sector's unique requirements.

International Collaboration

The analysis of opportunities for international collaboration will be refined to specifically address defense-related AI initiatives. Policymakers will explore successful collaborations between Pakistan and other nations in defense manufacturing, considering joint research, technology transfer, and collaborative projects. This analysis aims to identify strategic partnerships that enhance Pakistan's technological capabilities in defense AI applications.

Talent and Workforce Readiness

The analysis of talent and workforce considerations will extend beyond general skill assessments to a sector-specific evaluation. This involves identifying the specialized skills required for AI integration in defense manufacturing, assessing the readiness of the existing workforce, and developing strategies for upskilling. Policies will be tailored to nurture a skilled workforce capable of driving innovation in defense AI applications.

Through this detailed analysis of industry pioneers, startups, government initiatives, ethical and regulatory considerations, international collaboration, AI applications in defense manufacturing, and talent and workforce readiness, policymakers can derive nuanced insights. These insights will serve as the foundation for targeted amendments to the National AI Policy, ensuring its inclusivity and effectiveness in fostering the responsible integration of AI technologies within Pakistan's defense manufacturing sector.

Conclusion

In conclusion, the examination of Pakistan's National AI Policy within the context of defense manufacturing highlights the urgent necessity of addressing policy gaps to unlock the full potential of artificial intelligence (AI) in the country's defense system. A nuanced analysis of various aspects, including international cooperation, AI applications, talent development, and more, provides crucial insights into the strategic imperatives essential for the integration of AI technologies into the military production industry. It is paramount for Pakistan to rectify the deficiencies in its AI policy, recognizing that defense manufacturing has evolved into a sophisticated environment demanding a cohesive AI policy framework.

The amalgamation of AI and defense technologies presents boundless opportunities for innovation, efficiency, and a competitive edge. Addressing specific policy gaps is crucial to adapting the regulatory environment to the complexities and nuances of AI applications in defense. An ideal AI policy framework holds the potential for substantial benefits in Pakistan's defense manufacturing sector, providing guidance to other nations on collaborative efforts to bolster technological advancements through strategic partnerships. Moreover, robust policy frameworks foster ethical usage, ensuring privacy, addressing biases, and enhancing security in AI applications. Such frameworks also stimulate innovation and encourage investments in developing a skilled workforce dedicated to improving defense AI capabilities. Therefore, this study emphasizes the need for decisive measures to close these policy loopholes, specifically tailored to the intricacies of Pakistan's defense landscape. Refining existing policy frameworks, establishing global partnerships with leading AI nations, and developing a skilled workforce aligned with upcoming AI-related needs in defense technologies are imperative steps. Closing the policy gaps necessitates strategic changes in regulatory frameworks, substantial investments in research and development, and active engagement with all relevant industry stakeholders.

While acknowledging the commendable initiative of the existing National AI Policy draft, the analysis indicates that further steps are required to ensure its adequacy for the defense manufacturing sector. Amendments should be made to accommodate the specific intricacies of AI applications in defense, provisions for international collaboration, and tailored workforce development strategies. In conclusion, a proactive and comprehensive approach to refining the National AI Policy will not only strengthen Pakistan's defense manufacturing capabilities but also position the nation as a significant player in the global landscape of AI-driven innovation. This journey toward a well-structured AI policy framework represents an

investment in national security, technological advancement, and sustainable growth tailored to the unique needs of Pakistan's defense system.

Recommendations

Addressing the identified gaps in Pakistan's National AI Policy for defense manufacturing requires a comprehensive set of actions. Prioritizing these recommendations based on their potential impact and feasibility will pave the way for a strategic and effective implementation plan.

Refinement of Existing Policy Framework

The first recommendation is to undertake a thorough revision of the current framework through an appraisal of the identified gaps in the national AI policy. Therefore, an ad-hoc working group, including AI experts, representatives from MoIT&T, and Defense agencies, will be required. This will enable the enhancement of policy clarity, alignment with the unique requirements of the defense manufacturing industry, and incorporation of regimes appropriate to the complexity of AI applications in security. The prospect is a policy plan with large-scale impact; however, while feasible, it may be challenging to implement due to frequent changes.

Establishment of International Collaborative Platforms

One of the most significant recommendations is to enhance engagements with global AI leaders by building sharing platforms that foster information sharing, research partnerships, and technology transfer. This process would entail the creation of a diplomatic committee at the Ministry of Foreign Affairs in collaboration with the Department of Defense and ICT specialists. It will be substantial because it will strengthen Pakistan's technological power, stimulate creativity, and lead to greater achievements. Medium feasibility implies it is important for both diplomacy and resource use. Nevertheless, it is imperative to emphasize this suggestion to position Pakistan prominently on the international AI stage.

Investment in Research and Development Initiatives

A critical recommendation involves setting aside a budget to conduct research and development activities focused on defense manufacturing. This would require creating a dedicated committee under the Ministry of Finance and Planning, involving defense research institutions and private sector experts. The goal is to stimulate innovation, drive advancements in AI applications, and position Pakistan as a hub for cutting-edge defense technologies. With high feasibility and potential impact, this recommendation

is instrumental in ensuring that Pakistan remains at the forefront of technological advancements in defense.

Strategic Workforce Development Programs

Implementing specialized workforce development programs is essential to cultivating a skilled workforce capable of navigating AI applications in defense manufacturing. This recommendation includes launching educational partnerships and upskilling initiatives within the next six months, with continuous updates based on industry needs. Collaborating with educational institutions, industry associations, and the Ministry of Education is vital for program implementation. With high feasibility and impact, this recommendation addresses the critical aspect of developing a talent pool aligned with the evolving demands of AI-driven defense technologies.

Enhancement of Regulatory Clarity

Enhancing regulatory frameworks to provide clarity on ethical considerations, data privacy, and security in AI applications within defense manufacturing is a crucial recommendation. This involves forming a regulatory task force under the Ministry of Information Technology & Telecommunication, involving legal experts and industry representatives. The anticipated impact is the effective addressal of legal and ethical concerns, fostering responsible and accountable use of AI technologies. With medium feasibility, this recommendation is vital for ensuring a robust and ethical framework that governs AI applications in defense manufacturing.

Implementation Plan
Refinement of Existing Policy Framework

Initiating the review process within the next six months is critical, with the goal of finalizing amendments within one year. The responsible entities would include the established task force, with an estimated budget of $500,000. This budget would cover expert consultations, legal reviews, and stakeholder engagement, ensuring a comprehensive and well-informed refinement of the policy framework.

Establishment of International Collaborative Platforms

Beginning diplomatic engagements within the next three months and establishing collaborative platforms within two years is the proposed timeline. The responsible entities would be a diplomatic team led by the Ministry of Foreign Affairs, with an estimated budget of $1 million. This budget would cover expenses related to international conferences,

collaborative projects, and diplomatic missions, fostering meaningful partnerships with global AI leaders.

Investment in Research and Development Initiatives

Allocating funds in the upcoming annual budget and commencing initiatives within the next year is the proposed timeline. The responsible entities would be a dedicated committee under the Ministry of Finance and Planning, with an estimated budget of $2 million. This budget would support the initiation of research projects, driving advancements in defense technologies through focused R&D initiatives.

Strategic Workforce Development Programs

Launching educational partnerships and upskilling programs within the next six months is the proposed timeline. The responsible entities would collaborate with educational institutions, industry associations, and the Ministry of Education. The estimated budget of $1.5 million would cover expenses related to educational partnerships, training programs, and skill development initiatives, ensuring a skilled workforce aligned with the demands of AI-driven defense technologies.

Enhancement of Regulatory Clarity

Initiating regulatory enhancements within the next three months and implementing continuous updates over a one-year period is the proposed timeline. The responsible entities would be a regulatory task force under the Ministry of Information Technology & Telecommunication, with an estimated budget of $800,000. This budget would cover expenses related to legal consultations, regulatory reviews, and public awareness campaigns, ensuring clear and ethical governance of AI applications in defense manufacturing.

Key Performance Indicators (KPIs)

In evaluating the success and impact of the recommended actions, a set of Key Performance Indicators (KPIs) will serve as crucial metrics. These indicators are designed to gauge progress, effectiveness, and stakeholder satisfaction, ensuring a comprehensive assessment of the initiatives undertaken.

Refinement of Existing Policy Framework

To measure the success of the refinement of the existing policy framework, the following KPIs will be employed:

- **Percentage Improvement in Policy Clarity**: This metric quantifies the enhancement in the clarity and comprehensiveness of the AI policy, providing a tangible measure of the refinement's impact.
- **Stakeholder Satisfaction with the Revised Policy**: Evaluating the satisfaction levels of stakeholders, including government agencies, industry representatives, and AI experts, ensures that the revised policy meets the diverse needs and expectations of key stakeholders.

Establishment of International Collaborative Platforms

The success of establishing international collaborative platforms will be assessed through the following KPIs:

- **Number of Signed International Collaborations**: The number of alliances formed with international leading AI firms demonstrates the success of cooperation agreements and enhances multilateral interaction.
- **Quantifiable Growth in Technological Capabilities**: This KPI focuses on tangible changes in Pakistan's defense technological capacities due to such collaborations.

Investment in Research and Development Initiatives

To evaluate the outcomes of the investment in research and development initiatives, the following KPIs will be considered:

- **Number of Successful Research Projects Initiated**: Measuring the accomplishments resulting from investments and quantifying the degree of innovative progress made in defense manufacturing.
- **Tangible Advancements Achieved in Defense Technologies**: This KPI captures the tangible outcomes achieved in response to R&D programs, reflecting their quantitative significance for defense technologies.

Strategic Workforce Development Programs

The success of strategic workforce development programs will be assessed through the following KPIs:

- **Percentage Increase in AI-Skilled Workforce**: Quantifying the percentage increase in the number of professionals with AI-related skills within the defense manufacturing workforce, indicating the success of educational partnerships and upskilling programs.
- **Industry Satisfaction with the Skilled Workforce**: Evaluating the satisfaction levels of the defense manufacturing industry with the skilled workforce, ensuring that the workforce aligns with industry needs and expectations.

Enhancement of Regulatory Clarity

To measure the impact of enhancing regulatory clarity, the following KPIs will be utilized:

- **Percentage Improvement in Regulatory Frameworks**: Quantifying the improvement in regulatory frameworks governing AI applications in defense manufacturing, ensuring that legal and ethical considerations are effectively addressed.
- **Public Awareness and Understanding of AI Regulations**: Assessing the level of public awareness and understanding of AI regulations, indicating the success of public awareness campaigns and ensuring transparent communication about the regulatory landscape.

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ENERGY CONSERVATION POLICY ANALYSIS IN PAKISTAN: UNCOVERING DEFICIENCIES AND CHARTING A PATH FOR PROGRESS

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Abstract:

Energy efficiency policies are crucial in promoting sustainable energy use and reducing environmental impact. These policies, adopted globally, aim to address energy challenges such as increasing demand, environmental sustainability, and energy security. This research focuses on the evolution and implementation of energy efficiency policies in Pakistan, highlighting the need for a strategic framework to enhance energy management and address the country's ongoing energy crisis. The establishment of ENERCON in 1985 marked the beginning of Pakistan's efforts in energy conservation. The subsequent legislative developments, including the Pakistan Energy Efficiency and Conservation Act of 2011 and the National Energy Efficiency and Conservation Act of 2016, set the foundation for institutional initiatives. The recent National Energy Efficiency and Conservation Policy of 2023 aims to achieve energy-saving targets and reduce emissions. This paper underscores the importance of a holistic approach, including financial incentives, public-private partnerships, and comprehensive policy integration, to ensure long-term sustainability and optimal resource utilization in Pakistan's energy landscape.

Key words:

Energy Efficiency, Policy, Pakistan, Sustainability, Energy Conservation

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Introduction

Energy Efficiency Policy is a strategic framework designed to promote and regulate the efficient use of energy resources within a given jurisdiction. These policies aim to minimize energy waste, enhance productivity, and reduce environmental impact by encouraging the adoption of energy-efficient technologies, practices, and systems (Kerr, Gouldson, & Barrett, 2017). Governments and organizations worldwide recognize the significance of energy efficiency policies in addressing energy challenges, such as increasing demand, environmental sustainability, and energy security. These policies typically encompass a range of measures, including setting energy efficiency standards for appliances, promoting research and development in energy-efficient technologies, and providing incentives for businesses and individuals to invest in energy-saving initiatives (Mushafiq, Arisar, Tariq, & Czapp, 2023). The implementation of effective energy efficiency policies can result in numerous benefits, including cost savings, reduced greenhouse gas emissions, and increased energy security (IEA, 2019). As the global community intensifies efforts to combat climate change and ensure sustainable development, energy efficiency policies play a pivotal role in shaping a more resilient and sustainable future (Mushafiq et al., 2023).

Need for Energy Efficiency

The global discourse on energy efficiency has gained unprecedented importance, driven by recent events and comprehensive studies emphasizing its pivotal role in addressing worldwide energy challenges. Energy and electricity, while essential, can lead to wastage and environmental pollution if used without thought (Aslam, 2021). As cities and populations grow, the demand for electricity rises, especially in developing countries, posing challenges. Electricity shortages significantly impact industries and the overall economic situation on micro and macro levels. Globally, energy consumption is increasing by 3.4%, with the Asia-Pacific region experiencing one of the highest growth rates (Aslam, Nazir, & Zia, 2021). A notable report from the International Energy Agency (IEA) emphasizes the indispensable contribution of energy efficiency in addressing contemporary energy crises, proposing urgent measures to alleviate their profound impacts (IEA, 2022). The report indicates that enhancing action in energy efficiency could significantly reduce global CO_2 emissions by an additional 5 gigatons per year by 2030.
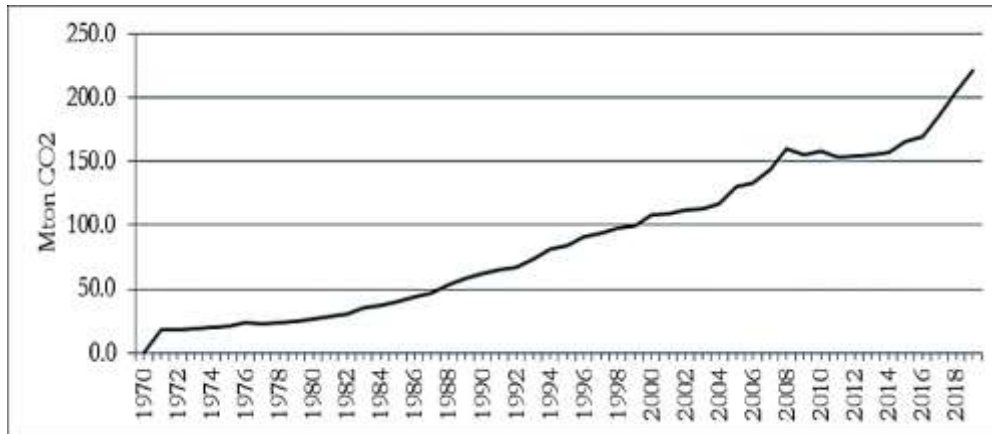
In the context of Pakistan, initiatives for energy efficiency play a central role in the national energy landscape. The country addresses unique energy challenges by focusing on green alternatives and various energy-saving solutions (Jilani, ur Rehman, & Islam, 2021). The urgency to expedite action in energy efficiency is underlined by the potential for significant reductions in CO2 emissions, recognizing its role as a vital escape route from the ongoing energy crisis (Xin, Bin Dost, Akram, & Watto, 2022). These incidents underscore the imperative for immediate and collaborative endeavors to enhance energy efficiency globally and within the specific context of Pakistan.

Evolution of Pakistan's Energy Policy

Pakistan's energy policy has undergone significant changes over the years in response to a myriad of challenges and opportunities. In the 1960s, the country heavily relied on hydropower projects like the Tarbela Dam, marking the initial stages of energy infrastructure development (Factsheet, 2020). The nationalization of energy assets in the 1970s and subsequent economic challenges in the 1980s and 1990s led to a shift in focus. The early 2000s witnessed privatization and power sector reforms to address inefficiencies, with a particular emphasis on attracting investments and improving efficiency through independent power producers (IPPs) (Mirjat et al., 2017). Recognizing the need for sustainable solutions, recent developments have seen a renewed focus on energy efficiency and renewable sources. The introduction of energy efficiency measures is critical to optimizing energy consumption and mitigating the impact of resource scarcity. The importance of addressing energy issues in Pakistan is underscored by the ongoing energy crises, which have persisted for more than a decade. The nation's reliance on imported fossil fuels, circular debt, political instability, and governance issues contribute to the challenges (Khatri et al., 2023). Pakistan's energy crisis emphasizes the need for a policy-making framework to enhance energy management through a probabilistic approach (Sajid & Javaid, 2018). The

energy industry in Pakistan is in crisis due to a lack of energy output to meet rising demand, underscoring the urgency of finding sustainable solutions (Ikram, 2022). In essence, addressing these challenges requires a holistic approach that combines effective policymaking, investments in alternative energy sources, improvements in governance and regulatory frameworks, and a strong emphasis on energy efficiency measures to ensure optimal resource utilization and long-term sustainability.

Energy Efficiency Regime in Pakistan

Establishment of ENERCON

The focus on energy efficiency and conservation in Pakistan began with the establishment of the Energy Conservation Project (ENERCON) in 1985 as a USAID project, aiming to enhance energy efficiency across different sectors of the economy (Team, 2021).

Pakistan Energy Efficiency and Conservation Act, 2011

The initial legislative step towards energy conservation was the Pakistan Energy Efficiency and Conservation Act of 2011, laying the groundwork for institutional development and initiatives in this domain (NEECA, 2016).

National Energy Efficiency and Conservation Act, 2016

A significant milestone occurred in 2016 when Pakistan enacted the National Energy Efficiency and Conservation Act. This legislation replaced the 2011 Act and received the President's assent on June 28, 2016. It marked a comprehensive effort to drive institutional development, improve energy efficiency, and address the country's energy challenges (Kenji, 2016).

National Energy Efficiency and Conservation Policy, 2023

In 2023, the government approved the NEEC Policy, outlining sectoral measures and a roadmap for sustainable energy development. This policy aims to achieve energy-saving targets and reduce emissions, emphasizing a holistic approach and stakeholder consultations (NEECA, 2023).

Problem Statement

Pakistan's energy sector faces a multitude of challenges that hinder its growth and efficiency. The country's overreliance on imported fossil fuels, particularly oil and gas, has led to soaring energy costs, placing a significant burden on the economy. This dependency on imported energy sources also

exposes Pakistan to price fluctuations and geopolitical uncertainties, making it vulnerable to supply disruptions. Additionally, the country's energy infrastructure is aging and inefficient, resulting in substantial energy losses during transmission and distribution. Moreover, despite the introduction of the NEEC Policy in 2023, significant gaps persist in its implementation. Furthermore, the lack of investment in energy efficiency measures across various sectors, including industry, transportation, and buildings, contributes to excessive energy consumption and exacerbates the energy crisis. These compounding challenges demand a comprehensive assessment of the energy efficiency policy that addresses the root causes of Pakistan's energy woes and paves the way for a sustainable energy future.

Analysis
Situational Analysis

Energy Landscape in Pakistan

In Pakistan, the energy mix includes natural gas, crude oil, coal, renewable energy, nuclear, and hydroelectricity. According to the Pakistan Energy Yearbook 2021-22, total primary commercial energy supplies were 94 million Tonnes of Oil Equivalent (TOE). Notably, natural gas led with 34.309 million TOE, followed by crude oil, petroleum products, and LPG at 29.493 million TOE. In terms of sources, oil accounted for 29.8%, natural gas 26.4%, and coal 17.2%. Final energy consumption in 2021-22 decreased by 7.46%, with the industrial sector leading at 35.1% (HDIP, 2023).

For oil, reserves were 31.2 million tonnes, with 3.6 million tonnes crude production and a USD 19.45 billion import bill. Natural gas had 19.5 trillion cubic feet reserves, producing 3,390 million cubic feet per day, with a 397,965,590 MMBtu LNG import bill. Coal, with 7,775.5 million tonnes reserves, produced 9.6 million tonnes, importing 18.1 million tonnes with a PKR 452 billion bill. In electricity, the installed capacity was 41,402 MW, generating 150,866 GWh, including 6,195 GWh from renewable sources. The country imported 463 GWh, while consumption reached 111,263 GWh. Pakistan's renewable energy installed capacity was 2,742 MW, generating 6,195 GWh (HDIP, 2023).

Energy Source	Share of Total Primary Commercial Energy Supplies (%)	Balance Recoverable Reserves	Production	Consumption	Import	Import Bill
Oil	29.8%	31.2 million tonnes (232.5 million barrels)	3.6 million tonnes (26.8 million barrels)	22.84 million tonnes of petroleum products and LPG	11.3 million tonnes of crude oil	US$ 19.45 billion
Natural Gas	26.4%	19.5 trillion cubic feet	3,390 million cubic feet per day	1,342 billion cubic feet	397,965,590 MMBtu of LNG	US$ 4,929 million
Coal	17.2%	7,775.5 million tonnes	9.6 million tonnes	27.7 million tonnes	18.1 million tonnes	PKR 452 billion
Electricity	14.9%	N/A	150,866 GWh (including 6,195 GWh of renewable energy generation)	111,263 GWh	463 GWh	N/A
LNG Import	10.1%	N/A	N/A	N/A	397,965,590 MMBtu	US$ 4,929 million
LPG	1.6%	N/A	1,610 million tonnes	1,277 million tonnes	N/A	N/A

Table 1. Energy Sources in Pakistan: A Comparative Analysis of Share, Reserves, Production, Consumption, and Import (HDIP, 2023)

Energy Crisis in Pakistan

Pakistan is an energy-deficit country, and its energy mix heavily relies on imported fuels such as oil and gas. This reliance results in a high import bill, posing a major challenge for the economy (Khatri et al., 2023). The primary energy supply of Pakistan is expected to grow to 116 MTOE by 2030 under the Business-as-Usual scenario. For power production, the major sources of primary energy supply in Pakistan are oil (37%), gas (29%), hydroelectricity

(30%), and coal (4%). The installed generation capacity in the country has reached 41,557 MW against a maximum total demand of 30,000 MW. This indicates an oversupply situation, which results in the operation of inefficient power plants over efficient ones.
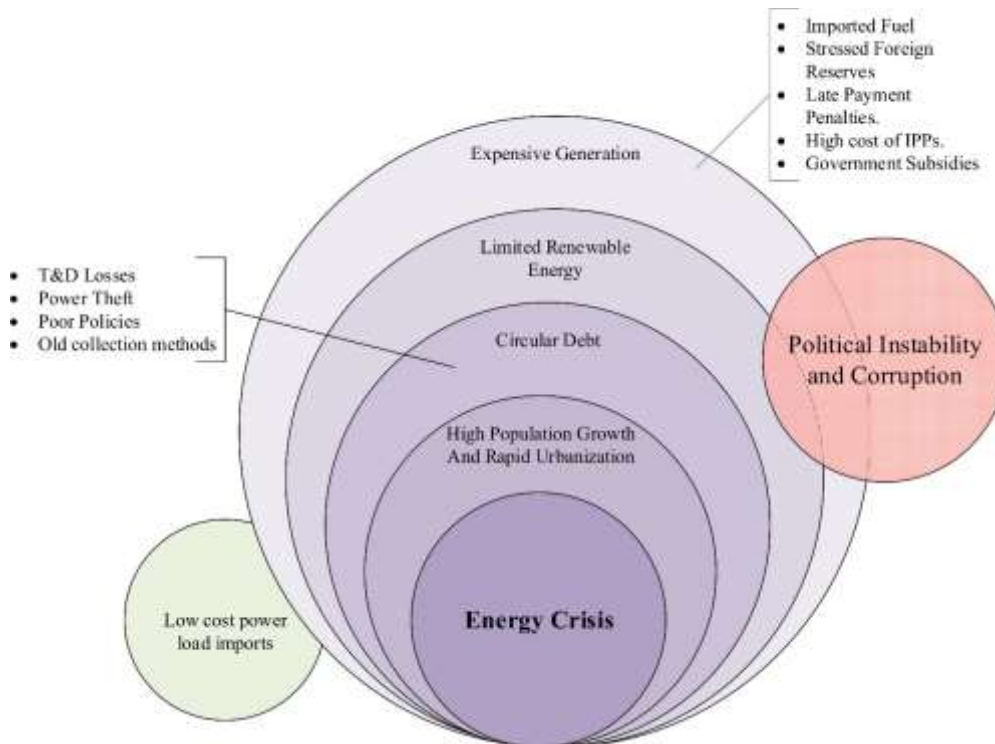
Figure 2. Energy crises in Pakistan (Khatri et al., 2023)

Recent studies highlight the uncertainty in energy data, indicating challenges in effective energy policy formulation (Sajid & Javaid, 2018). The energy sector faces systemic problems, influencing the overall economic situation. A critical analysis of Pakistan's economic and energy landscape is imperative to understand the complexities of the crisis (Khatri et al., 2023).

SDG 7: Ensuring Affordable and Clean Energy

The seventh Sustainable Development Goal (SDG 7) focuses on ensuring access to affordable, reliable, sustainable, and modern energy for all. Energy efficiency is a crucial aspect of this goal, as it plays a pivotal role in reducing energy consumption, mitigating climate change, and promoting sustainable development.

Pakistan is committed to achieving SDG 7 on energy efficiency. The country has set ambitious targets for reducing energy consumption and increasing the share of renewable energy in the energy mix. However, despite the progress made, Pakistan still faces a number of challenges in achieving SDG 7. The

country's energy infrastructure is aging and inefficient, and there is a lack of investment in energy efficiency and renewable energy. Additionally, Pakistan's energy sector heavily relies on imported fuels, making it vulnerable to price fluctuations. To achieve SDG 7, Pakistan will need to continue investing in energy efficiency and renewable energy.

Dimensions of Issues

The preceding analysis illuminates critical issues within Pakistan's energy sector, necessitating attention under the NEEC Policy. These challenges include:

- **Limited Financing Access:** Energy efficiency projects face hurdles in securing funds due to high initial costs, extended payback periods, and a lack of performance guarantees for solution providers.
- **Information Asymmetry:** Major stakeholders rely on traditional channels such as technicians, electricians, masons, and TV advertisements, leading to information asymmetry for energy-efficient products.
- **Inadequate Energy Information Sharing:** Insufficient sharing and delivery of energy information hinder investments in energy efficiency programs.
- **Low Implementation in Industry:** Industry lags in implementing energy efficiency measures due to a lack of awareness, capacity, and effective regulatory frameworks.
- **Inefficient Energy Use in Buildings:** Buildings experience energy inefficiency through poor insulation, outdated equipment, and a lack of awareness among occupants.
- **Limited Adoption of Energy-Efficient Transportation:** High technology costs, lack of incentives, and limited infrastructure hinder the adoption of energy-efficient transportation systems.
- **Challenges in the Agriculture Sector:** The agriculture sector faces obstacles in adopting energy-efficient practices, stemming from a lack of awareness, capacity, and technology access.
- **Supply-Side Inefficiencies in the Power Sector:** Outdated equipment, insufficient transmission and distribution infrastructure, and high losses contribute to inefficiencies in the power sector.
- **High Power Distribution Losses:** Outdated power infrastructure and inefficient equipment contribute to high power distribution losses, reaching over 38% for some Distribution Companies (DISCOs).
- **Potential Solution:** Implementing demand-side management through energy efficiency and conservation measures stands out as a strategic approach to alleviate the burden on the national grid, presenting a silver bullet for peak shaving.

Analytical Techniques

The following analytical techniques have been employed to assess the current energy conservation policy and to develop recommendations for improvement:

Policy Gap Analysis

A gap analysis of the NEEC Policy 2023 has been conducted by comparing the policy's goals and objectives with the current state of energy efficiency and conservation in Pakistan. The following are some of the key gaps that have been identified:

Institutional and Regulatory Gaps

- Weak intergovernmental coordination between the federal and provincial governments on EE&C issues: This gap could be addressed by establishing a mechanism for regular consultation and coordination between the federal and provincial governments on EE&C issues.
- Lack of adequate capacity and resources at the provincial level to implement EE&C measures: This gap could be addressed by providing funding and technical assistance to the provincial governments to develop and implement EE&C programs and initiatives.

Economic and Financial Gaps

- High upfront costs of energy efficiency investments: This gap could be addressed by providing financial incentives to businesses and individuals to invest in energy efficiency, such as tax breaks, rebates, and loans.
- Lack of access to affordable financing for EE&C projects: This gap could be addressed by developing innovative financing mechanisms for EE&C projects, such as public-private partnerships and green bonds.
- Lack of economic incentives for businesses and individuals to adopt energy-efficient technologies and practices: This gap could be addressed by developing market-based mechanisms to promote energy efficiency, such as carbon pricing and energy efficiency trading schemes.

Awareness and Knowledge Gaps

- Low awareness among consumers and businesses of the benefits of energy efficiency: This gap could be addressed by raising awareness of the benefits of energy efficiency through public education campaigns and other outreach initiatives.
- Lack of technical expertise and skills in the field of energy efficiency: This gap could be addressed by investing in training and capacity building programs for energy efficiency professionals.

Technology Gaps

- Limited availability of energy-efficient technologies in the Pakistani market: This gap could be addressed by promoting the development and commercialization of energy-efficient technologies in Pakistan.
- High cost of imported energy-efficient technologies: This gap could be addressed by reducing tariffs and other trade barriers on imported energy-efficient technologies.
- Lack of local capacity to manufacture energy-efficient products: This gap could be addressed by investing in research and development and technology transfer initiatives to promote the local manufacture of energy-efficient products.

Gaps in Implementation

- Lack of a comprehensive implementation plan for the NEEC Policy 2023: This gap could be addressed by developing a comprehensive implementation plan for the NEEC Policy 2023 that outlines the specific actions that need to be taken by the government and other stakeholders to achieve the policy's goals.
- Weak monitoring and evaluation mechanisms for tracking the progress and impact of EE&C measures: This gap could be addressed by developing robust monitoring and evaluation mechanisms to track the progress and impact of EE&C measures and identify areas where further improvement is needed.

Policy SWOT Analysis

The following is a detailed Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis of the EE&C Policy in Pakistan:

Strengths (Internal Factors)

1. The policy provides a comprehensive framework and guidelines for promoting EE&C in key sectors of the economy, including industry, buildings, transport, and agriculture.
2. The government has established provincial designated agencies to ensure effective implementation and monitoring of the policy.
3. The government is committed to the policy and has provided financial and technical support.
4. Pakistan has a pool of experienced experts and professionals in EE&C, and there is a range of technology options available for EE&C interventions.
5. The policy is aligned with the country's national energy policy and sustainable development goals, and it has a strong focus on capacity building and awareness raising.
6. The government has developed a number of financial incentives to

promote EE&C investments, such as tax breaks, rebates, and subsidized loans.

Weaknesses (Internal Factors)

- There is limited awareness and knowledge about EE&C, particularly among SMEs and consumers.
- There are insufficient financial and human resources for policy implementation and enforcement.
- There are operational and technical gaps, such as limited availability of energy-efficient products and services, lack of testing infrastructure, and a shortage of certified energy auditors.
- There are financial gaps, such as limited financial and credit products.
- EE&C policy implementation is still in its early stages, and the institutional and regulatory framework needs to be strengthened.
- Private sector involvement in EE&C is still limited, and a more enabling environment for private sector investment needs to be created.
- A more robust system for monitoring and evaluating EE&C policy implementation needs to be developed.

Opportunities (External Factors)

- The increasing demand for energy and rising energy prices are creating a need for higher energy efficiency and conservation measures.
- The availability of clean energy technologies and renewables could help increase energy efficiency and reduce carbon footprints.
- There is potential for collaboration with international partners for knowledge sharing and support in financing EE&C interventions.
- Rapid advancements in digital technologies, such as the Internet of Things (IoT) and Artificial Intelligence (AI), could open up new opportunities for EE&C interventions and monitoring.
- The growing interest in green finance and sustainable investment presents an opportunity to mobilize financing for EE&C projects.
- The development of smart grid technologies could enable more efficient energy management and distribution.
- The adoption of behavioral economics principles could help promote energy efficiency among consumers.

Threats (External Factors)

- The availability of fossil fuels and increasing reliance on imports could increase energy costs and affect energy security.
- Exchange rate volatility and economic uncertainty could affect financing and investment in EE&C interventions.
- Ineffective policy implementation due to political or bureaucratic hurdles could hinder the progress of the EE&C agenda.
- Climate change and natural disasters could disrupt energy supplies and

create infrastructure challenges.
- The lack of political will or commitment could undermine EE&C policy implementation.
- Rising energy subsidies could reduce incentives for EE&C investments.
- The high upfront costs of some EE&C technologies could be a barrier to adoption, especially among SMEs and low-income households.

Policy Stakeholder Analysis

Stakeholder analysis involves identifying key stakeholders, assessing their interests, needs, and concerns, and prioritizing their involvement in policy development and implementation. The main stakeholders identified in the NEEC Policy 2023 are:

a. **Government:** The federal and provincial governments of Pakistan are key stakeholders in the policy development and implementation process. The federal government has established the NEECA, responsible for promoting energy efficiency and conservation in the country. The provincial governments are responsible for implementing energy efficiency and conservation measures at the local level. The government's interest in the policy is to meet its international climate commitments, improve energy security, and promote economic development.

b. **Industry:** The industrial sector is a major stakeholder in the policy development and implementation process. Industries are significant energy consumers, and a reduction in energy costs can lead to increased competitiveness and profitability. Industrial stakeholders may have concerns about the cost of incorporating energy efficiency measures, potential impact on production processes, and potential impact on competitiveness.

c. **Consumers:** Consumers are key stakeholders in the policy development and implementation process. Improving energy efficiency can help reduce electricity bills for households, resulting in increased disposable income. Consumers may be interested in policies that promote the use of energy-efficient products and appliances and may need information on selecting energy-efficient options to achieve savings.

d. **Energy Suppliers:** The energy sector, including electricity and gas suppliers, is an important stakeholder in the policy development and implementation process. Improved energy efficiency may result in lower demand for energy, impacting the industry's revenue. However, energy suppliers can benefit from reducing the demand for energy and improving the reliability of energy supply.

e. **Financial Institutions:** Banks and other financial institutions are important stakeholders in financing energy efficiency and conservation measures. Incentives and financing programs can encourage investment in energy-efficient equipment and projects, reducing the financial burden on companies and households. Financial institutions may be interested in

policies that reduce risks involved in financing energy-efficient projects.

f. **Civil Society:** Civil society organizations, including environmental NGOs, consumer advocacy groups, and energy efficiency professionals, are stakeholders in the policy development and implementation process. Civil society organizations can provide technical expertise and advocacy for consumer and environmental interests and may also act as watchdogs over the implementation and enforcement of energy efficiency policies.
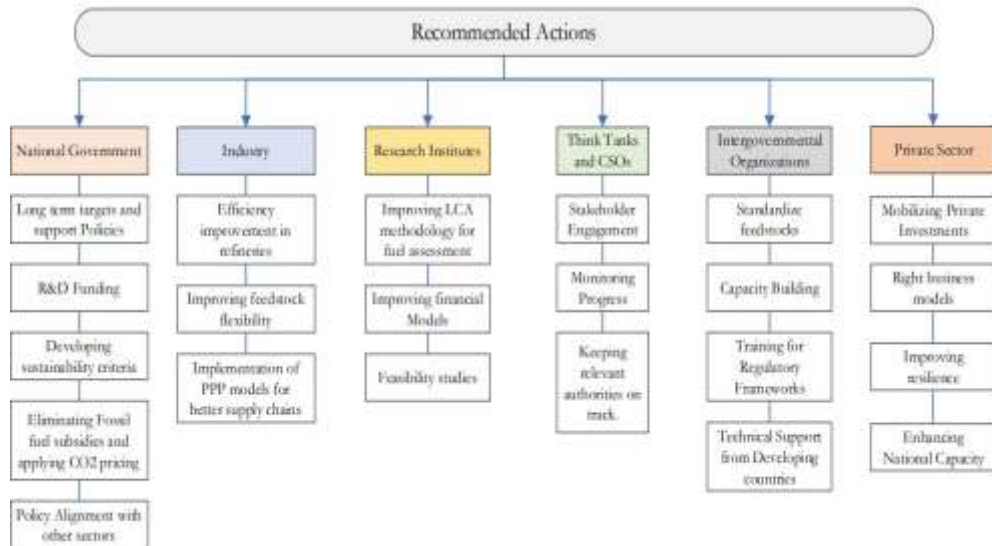
Core Outcome

The policy paper underscores the importance of energy efficiency policies in tackling global energy challenges, aligning with Pakistan's distinct energy issues. Assessing the NEEC Policy 2023 revealed gaps like institutional and regulatory shortcomings, provincial capacity deficits, and insufficient economic incentives. These gaps underscore the need for a comprehensive strategy to address financial, knowledge, and technological challenges.

Additionally, the policy paper identifies opportunities and challenges in Pakistan, such as collaboration potential and clean energy technologies versus financing constraints, information gaps, and equipment inefficiencies causing power losses. These factors emphasize the necessity for investments, bridging information gaps, tailored awareness programs, and regulatory frameworks, plus a power sector overhaul.

Conclusion

The success of Pakistan's National Energy Efficiency and Conservation Policy hinges on a holistic approach to addressing financial barriers, information gaps, and sector-specific challenges. The policy should incentivize

investments, bridge information asymmetry, and implement tailored awareness programs and regulatory frameworks in key sectors. Additionally, a comprehensive overhaul of the power sector, focusing on infrastructure upgrades and reducing power losses, is crucial. The integration of demand-side management measures is imperative to alleviate stress on the national grid, providing a strategic solution for peak shaving. Ultimately, the NEEC Policy's success lies in fostering collaboration, promoting innovation, and ensuring sustained commitment to achieving energy efficiency and conservation goals in Pakistan's dynamic energy landscape.

Recommendations

The following recommendations are made to address the deficiencies in the current energy conservation policy and chart a path for progress:

Short Term Recommendations:

a. Raise Awareness Immediately: Launch an immediate public education campaign highlighting the benefits of energy conservation. Initiate short-term behavioral change programs for consumers.

b. Financial Incentives: Implement short-term financial incentives like temporary tax breaks and rebates for quick adoption.

c. Institutional Capacity: Provide immediate funding boosts to NEECA to enhance its short-term capabilities.

Medium Term Recommendations:

a. Integrated Policy Development: Develop and implement an integrated energy conservation policy within the next 1-2 years.

b. Behavioral Change Emphasis: Integrate behavioral change initiatives into the NEEC Policy 2023 within the next 2-3 years.

c. Research and Development: Allocate medium-term funds for research and development in energy-efficient technologies.

d. Public-Private Partnerships: Strengthen and expand public-private partnerships over the next 2-3 years.

e. Targets Revision: Revise and set more ambitious targets for energy efficiency in the mid-term.

Long Term Recommendations:

a. Comprehensive Energy Policy: Develop a comprehensive energy conservation policy addressing all sectors for long-term sustainability.

b. Innovative Financial Incentives: Establish long-term fiscal policies and financial incentives for sustainable energy practices.

c. Research and Development Investment: Continue investing in long-term research and development for sustainable technologies.

d. Institutional Strengthening: Strengthen institutional frameworks for long-term efficiency through continuous funding and training.

e. Policy Integration: Ensure integration of EE&C with national policies for sustainable development and climate change goals.

Enabling Action Areas:

a. Immediate Measures: Launch immediate cross-cutting measures such as energy information sharing and appliance testing.

b. Regulatory Measures: Implement mandatory regulatory measures and energy audits within the next 1-2 years.

c. Financial Incentives Implementation: Establish and implement financial incentives like tax credits and subsidies over the next 2-3 years.

d. Capacity Building: Focus on continuous capacity building for government departments over the long term.

e. Investment Prospectus Linkages: Ensure immediate linkages of investment programs with the National Energy Efficiency and Conservation Action Plan.

INTENDED BENEFITS OF POLICY CHANGES

The envisaged benefits resulting from the modifications in the NEEC Policy 2023 are as follows:

a. **Greenhouse Gas (GHG) Emission Reduction:** Mitigating GHG emissions associated with energy consumption aligns with Pakistan's commitment to curbing emissions under the Nationally Determined Contributions (NDCs) and contributes to global climate change mitigation efforts.

b. **Enhanced Energy Sustainability:** Promoting energy sustainability fosters industrial competitiveness, reduces the energy import bill, facilitates the transition to clean energy, enhances access to energy, and aligns with the NDCs and Sustainable Development Goal #7.

c. **Balanced Energy Supply and Demand:** Closing the gap between energy supply and demand ensures a stable energy supply, minimizing shortages during peak demand periods.

d. **Reduced Energy Bills:** Lowering energy bills for households, businesses, and the government increases disposable income and competitiveness, particularly for export-oriented industries.

e. **Job Creation in the Energy Sector:** Generating employment opportunities in the energy sector, specifically in energy audits, management, and building and industrial retrofitting.

f. **Wider Availability of Energy-Efficient Products:** Facilitating an increase in the market availability of energy-efficient products fosters competition, reduces prices, and stimulates demand.

g. **Enhanced Quality of Life:** Improving access to affordable and sustainable energy for all contributes to an overall improvement in the quality of life for the people of Pakistan, simultaneously reducing pollution from energy production and use.

h. **Holistic Societal and Economic Benefits:** The effective implementation of energy efficiency and conservation policy changes has the potential to yield multiple benefits, extending beyond the energy sector to various sectors of Pakistan's economy and society.

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MADRASSA GOVERNANCE IN KP: IDENTIFYING POLICY CHALLENGES AND CHANTING A COURSE FOR REFORM

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KJPP

Abstract:

The term "madrassa" refers to an institution providing Islamic education and operates independently with its own system, primarily through the Dars-i-Nizami syllabus. In Pakistan, madrassas have historically played a critical role in the development and character-building of Muslim society, offering accessible education. However, post-9/11 scrutiny has led to numerous studies focusing on their education system, administration, and management. The governance of madrassas, particularly in the KP province, faces criticism for its resistance to change and lack of inclusivity in reform efforts. This paper explores the current governance structure, the challenges faced, and policy recommendations for a more inclusive reform strategy. Effective reform must involve the madrassa leadership to address issues such as curriculum modernization, teacher training, and transparent funding. The goal is to integrate madrassas into mainstream education while respecting their religious significance, ultimately enhancing educational outcomes and social development in Pakistan.

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Introduction

The word "madrassa" originates from an Arabic term, indicating an institution that imparts Islamic education. It is an independent entity with its own education system. Madrassas provide free education to the Muslim community according to their syllabus called Dars-i-Nizami. It is evident that madrassas have significantly contributed to the development of Muslim society and play a crucial role in character-building (Sodhar, Rasool, & Humanities, 2013). In a society like Pakistan, madrassas are among the most feasible and easily accessible means of education for many people (S. J. G. E. M. Bhattacharya, 2014). Madaris and their education system came under the limelight and attracted international attention after the catastrophic incident of 9/11. A series of research studies have been conducted regarding their education system, administration, and management (S. Bhattacharya, 2002).

The madrassa education system in Pakistan is divided into three main parts: Ibtida'i, Vustani, and Fauqani. At the Ibtida'i level, madrassas provide primary-level education, which includes memorization and teaching of the Holy Quran. Additionally, students are taught Shahadat-ul-Aa'am and Shahadat-ul-Kha'sa, which are equivalent to matriculation and intermediate-level education at the Vustani stage. In the third stage, madrassas teach Shahadat-ul-Aa'lia, equivalent to a bachelor's degree, and Shahadat-ul-Aalamia, equivalent to a master's degree. In Pakistan, a large number of madaris are registered under different boards based on sects. These madrassa boards operate independently and have framed policies for the registration, regulation, management, administration, and examination of their affiliated madaris (Hakim Ali, 2015).

The current governance structure of madaris is under extreme criticism and faces numerous challenges. It is commonly observed that madaris are reluctant to change their governance structure and resist reforms. It is also perceived that the top management of madaris was ignored by the government when framing the reform agenda (Sajjad, 2013). Change is essential for sustainable development in any system, and the entire world is embracing rapid changes in governance structures. Madaris are very slow in adapting to changes in their governance structure, which directly affects their education system. The religious education system has remained unchanged and outdated for a long time. Therefore, madrassa management needs to modify and upgrade their education system in line with the demands and needs of the modern world (Zain Ul Abdin Sodhar).

Problem Statement

It is perceived that madrassas are the main root of extremism and a source of threat to global security and peace. After the catastrophic events of 9/11, madrassa reforms have become a core subject of discussion at both national

and international levels. New developments at the international level have increased the importance of madrassa reforms. Madrassas play a crucial role in the social structure and are considered a central part of the country's education system. To address a wide range of issues related to madrassa governance, various steps have already been taken to bring them into the mainstream. However, due to a trust deficit between the government and madrassa management, the reform strategy has failed. Furthermore, to address the main concerns and issues of madrassa governance, registration, regulation, and curricula, the government has formulated a new reform strategy under the National Action Plan (NAP). Currently, the entire religious community and madrassa management are not satisfied with the steps taken under the new reform strategy, as there is a lack of trust among all stakeholders. There is a dire need to frame a viable and sustainable framework to identify policy challenges and suggest practical courses of action for madrassa reform.

Scope of Study

Reforming madrassas (plural: Madaris) is a highly debatable issue in the country. This research paper explores the government's efforts to reform the madrassa system, highlighting steps taken to mainstream madrassa education. The study identifies the main hurdles in policy implementation and examines the effects of policy-based interventions since 2013. Additionally, it provides an in-depth analysis of the challenges faced during the reform process. The paper also suggests steps for further improvement in the reform strategy, aiming to create a more effective and sustainable framework for integrating Madaris into the broader education system.

Literature Review

The current education system in Pakistan, encompassing public, private, and religious sectors, is ill-equipped to address multi-dimensional challenges and rapid changes. Globalization has highlighted the importance of good governance and education for swift development. Modern technology has greatly influenced education, yet both contemporary and religious education systems in the country struggle to adapt. Following independence, the role of Islamic education expanded due to the Islamization policy, positioning madrassa education as an alternative system in the country. However, after the catastrophic 9/11 attacks, a madrassa reform strategy was implemented without the religious community's consent. This move was widely perceived as part of a foreign agenda to control Madaris, resulting in a significant trust deficit between the government and the religious community, particularly during Musharraf's era (Zaidi, 2013).

Madrassas are well-structured institutions providing foundational Islamic education to a large segment of society. Despite their extensive reach, research indicates that Madaris are unable to keep pace with global changes and fail to align with the principles of good governance. Furthermore, madrassa education does not meet modern educational standards (Hakim Ali, 2015). Since 9/11, the madrassa system has faced continuous scrutiny, leading to controversy among stakeholders. The government's reform strategies and policy decisions have been criticized, exacerbating challenges for Pakistani society. The perception that the reform agenda is foreign-imposed has deepened the trust deficit between the government and religious institutions (Ghani, 2021).

Research methodology

This policy paper employs a desk research approach, relying entirely on the analysis of existing literature, data, and records to derive its findings and recommendations. This method was chosen to thoroughly evaluate the findings of related studies and to examine the outcomes of reform strategies implemented by the provincial government over the past decade. The desk research approach enables a comprehensive review of existing policies and their impacts, allowing for the identification of key bottlenecks in the current reform strategy.

The research involved a systematic collection and analysis of secondary data from various sources, including government reports, academic studies, policy papers, and other relevant documents. The gathered data was meticulously organized to trace the progression of reform efforts, identify recurrent challenges, and understand the broader context of madrassa reforms in Pakistan. By synthesizing this information, the paper aims to provide a nuanced understanding of the efficacy of past and current reform initiatives.

Furthermore, the methodology includes a critical assessment of the reform strategies' alignment with contemporary educational standards and governance principles. This assessment is crucial for highlighting gaps and suggesting practical measures for successful implementation. The desk research approach not only allows for a detailed examination of historical and current data but also ensures that the recommendations are grounded in evidence and best practices from related fields.

Results and Discussion

The Islamic Republic of Pakistan is founded on Islamic ideology, which relies on the Quran and Sunnah. Madaris are key pillars for learning the Quran and Sunnah, thus reinforcing the Islamic ideology of Pakistan. Unfortunately, after 9/11, Pakistani Madaris were targeted and depicted in international

media as epicenters of terrorism and extremism. Therefore, there is a strong need to change this perception and reform the Madaris of KP to align with contemporary life for Muslims worldwide. Here, we present the key hurdles faced by the Madaris of KP and suggest reforms in the following key areas:

Need for Reforms in Madaris of KP, Pakistan

Based on several critical issues, reforms in KP Madaris are necessary. Some of the most influential problems are listed below:

Lack of Modern Education

The madrassa curriculum and teaching methods are extremely antiquated and rigid due to the lack of access to modern education. Madrassa teachers face issues such as stagnant curricula, a lack of community trust, and financial crises daily. The administration of madrassas often refuses to support contemporary education and lacks adequate teaching facilities, seeking funding from national or international sources only (Iqbal, Yousaf, Shaheen, & Nisa, 2023). Madrassa teachers have not received the necessary training to handle and maintain experimental and ICT equipment, making them wary of new technologies. Due to a lack of funding and resources, madrassas cannot engage qualified modern education subject teachers or provide appropriate lab equipment and ICT facilities to students.

Extremism and Militancy

Under Zia's rule, extremism and militancy in madrasas increased, fostering a violent and extremist mentality. This shift was detrimental, transforming Madaris from renowned centers for study and research into hubs of extremism. They were used as camps for the Afghan Jihad by Pakistani and US secret services and eventually became centers of sectarian hatred. Harvard University scholar Jessica Stern highlights the close connection between religious indoctrination and Madaris in her research (Stern, 2000). The administration has attempted to combat religious fanaticism, but efforts have been hindered by a lack of trust between the government and seminary leaders, flaws in Pakistan's legal system, the attitudes of state and religious leaders toward religious minorities, and the failure to fully implement the National Action Plan (Malik, Khan, & Fatima, 2021).

Lack of Consistency in Policy

There is a lack of uniform policies in Madrassa education. Proper registration under specific acts and with the Education Department, but not under the Societies Act, is missing. Similarly, no incentives are given to Madaris that decide to cooperate. A separate organization dealing with madrasas at the KP provincial level should be created (Muslihuddin, 1988). There is also a need

to improve rather than eliminate; the approach should be 'Motivate and Change'. The government should focus on improving the Madaris without resorting to confrontation (Dogar, 2010).

Regulatory Authority

Strong regulatory frameworks and efficient monitoring systems are necessary to address the issues in madrasa governance. Insincere attempts will worsen the situation. A powerful board with full government authority should be established to ensure policy implementation. This board should include representatives from the madrasas as well (Nayyar, 1998).

The Main Obstacles to Reforming the Madrassa and Its Education System

Funding

A major concern with madrassa reforms is the availability of sufficient funding. Madaris are essential for the education of underprivileged individuals who would otherwise be unable to afford to send their children to school. Therefore, developing the institutions currently in operation is necessary. The 1973 Pakistani Constitution states that it is the state's responsibility to offer free secondary education to all Pakistanis. Conversely, the vast majority of Madaris receive their support from independent sources.

Political Resistance

Madaris often have strong political and religious affiliations. Powerful religious and political groups may resist any attempts to reform these institutions, viewing them as a challenge to their authority and influence. Deobandi Madaris, led by JUI-F (a major political party in KP), have posed the greatest challenge. The party opposes madrassa reforms because they have been instrumental in using Madaris for political purposes and have become a source of its political survival (Shah, Qazi, & Religion, 2023).

Lack of Registration

There are 8,528 Madaris in KP, out of which 2,517 have been registered so far. The majority objected to the government's financial and infrastructure assistance due to concerns about the government accessing their private information. This reluctance to disclose information to the government also contributed to the 2002 failure of the Madrassa Reform Strategy. Large Madaris were sponsored by wealthy individuals and charitable organizations in Saudi Arabia and other Gulf nations. Consequently, it was difficult for the government to make its financial incentives for madrassa officials attractive due to this external funding (Bashir & Ul-Haq, 2019).

Misrepresentation

In the 1980s, when the Pakistani government began enlisting madrassa students to fight the proxy war in Afghanistan, a militant image of Madaris spread worldwide. Although only a small percentage of madrassa students participated in the conflict, the entire madrassa community was associated with violence. Despite the fact that the Pakistani government was partly responsible for this misrepresentation, it did little to restore the Madaris' reputation when the West condemned them. The decision to subordinate Madaris to the ministry in charge of homeland security, rather than to government organizations responsible for social welfare and education, further perpetuated the stereotype (Bashir & Ul-Haq, 2019).

Social Acceptance

Madaris teachers and students are often perceived as being outside the social mainstream. Only 10% of students enroll in Madaris; the remaining students attend other formal educational programs. Of these 10%, only 1% can understand religious instruction. Additionally, the public views Madaris more as places to deposit zakat and charitable contributions than as centers of learning. People associated with Madaris are typically perceived as outdated and lacking in knowledge of modern technology. Students are seen as outsiders in society and are not considered for official positions. The public views students as an additional segment of society, and parents often prefer to send their weakest child to a madrasa (Habib, Bhatti, Khan, & Akbar, 2021).

Causes of the Reform Agenda Failure

The lack of a well-thought-out plan, coordination issues between different ministries and departments, and insufficient participation among Madaris were the reasons for the previous Madrassa Reform Program's failure. Although the actual targets were the Deobandi and Ahl Hadith schools of thought, this was not disclosed, as most of the Madaris that received support belonged to the Barelvi school of thought. According to forecasts, the Ministry of Religious Affairs has registered considerably more Madaris than actually exist in the nation. The planned incentives and support for Madaris were primarily cosmetic, which made them unappealing, particularly when compared to their sources of funding (which no Madrassa is willing to disclose).

Reforms in Provincial Madrassas: Issues and Opportunities Governments took a while to get started and often believed that the federal government should be in charge of major projects. The government's refusal to include Ulema raised concerns among Madaris pupils. The Madrassa Reform Initiative (MRP) is a prime example of a poorly executed and coordinated initiative, despite sufficient funding being provided for its success. This is

evidenced by extremely low fund utilization as well as failure to develop fund utilization capabilities (Dogar, 2010).

Religious Community Creating Hurdles in the Implementation of the Reform Agenda

The madrassa reforms were fiercely opposed by the religious community. They no longer support the inclusion of need-based studies and have taken a negative stance toward madrassa reforms. They believe that secular education serves a Western agenda and criticize it on these grounds. Consequently, without considering the purpose or methodology of the changes, madrassa reforms are viewed as an attack on religion. These religious groups believe that those with qualifications and religious education are not as good Muslims as they are and could harm Islam while serving Western interests. They argue that there is neither a historical precedent for the modernization of madrassas nor a model for the new methods of madrassa education. Such attitudes and perceptions impede madrassa reforms. Additionally, they believe that since the current madrassa system meets society's religious needs, reform is unnecessary. Compared to its benefits, modernizing madrassas poses significant risks. They often disguise this sentiment by labeling reforms as "anti-Islam" or ineffective (Rabbi & Habib, 2019).

Counter-Terrorism Actions Create a Deficit of Trust Between the Religious Community and the Government

The government's efforts to combat terrorism have sometimes been perceived as targeting religious seminaries and groups, leading to concerns among religious communities. The ulama's commitment to helping Afghanistan and Kashmir, two of their major undertakings, was a driving force behind the focus on madrassas. The ulama directed their efforts toward ensuring that the group they supported would take over in Kabul once the war in Afghanistan ended in 1988. The September 11 events had a significant impact on Pakistan. While the United States had accused Osama bin Laden and the Taliban, Jamate Islami (JI) was eager to attribute the attacks to Jews. In response to this unfounded accusation, the JI launched a major campaign to undermine the Pakistani government by claiming it was a US proxy. Osama bin Laden and the Taliban leadership were close to many of the ulama. The Pakistani government was requested to offer logistical support and secure its western borders when US and NATO military operations in Afghanistan began. The wave of anti-American sentiment caused by Western intervention in Pakistan, particularly in KP and Baluchistan, increased the power of the JI. Riding this wave, the ulama proceeded to organize various religious parties in the nation's response (bin Mohamed Osman, 2009).

Conclusion

The current paper emphasizes the governance system of Madaris in the KP province. It also focuses on policy analysis and outlines steps to make the madrassa reform strategy more inclusive and integrated. The study will examine key dimensions of reform policy to overcome the trust deficit between the government and the religious community. We discuss the best possible ways to successfully implement the reform agenda. The madrassa situation remains as convoluted as ever. There is an inherent distrust when external forces are involved in religion, which may necessitate a more self-aware developmental path. This realization has led Curtis, for example, to advise foreign donors to avoid sweeping reforms of madrasas and to recognize their value for Pakistan's social life as well as education.

The government's, local and international media's, and academia's post-9/11 madrassa reform efforts did not significantly influence Pakistan because the ulama's opinions were not given much weight in the discussions. The topic of madrassa reform following 9/11 is largely left unspoken by the Ulama running the talks. This was the major reason why nothing substantial could be accomplished on the ground despite massive financial outlays, loud rhetoric, and media efforts. Without taking into account the concerns of the Ulama, reforming Pakistan's madrassa curriculum and system is challenging. The Ulama must be included in the reform of madrassa education, their issues must be resolved, and they must be made partners in the fight against religious extremism and militancy in the nation.

Pakistani madrassa education faces many challenges, from religious fanaticism to inadequate instruction. However, Madaris are well-established in Pakistan's socioeconomic environment and often do not require government assistance. Therefore, without addressing the needs of these institutions, no significant regulatory breakthrough in madrassa education can be anticipated. We now understand why many previous attempts have failed.

We conclude this paper with a consideration that goes beyond madrassa education reforms in KP, Pakistan. In Pakistan, Madaris serve as more than just places for religious instruction. For school-age children, they are often the only sources of educational resources. While it is critical to integrate Madaris into mainstream education, it is even more important to expand the reach and efficacy of public education and social services to reduce the socioeconomic reliance of Pakistani society on Madaris. It is crucial to ensure that children enroll in madrassas out of interest in Islamic studies rather than due to a lack of housing, food, or education.

Recommendations

In conclusion, this paper offers recommendations for reforming Madaris in the KP province. These suggestions aim to guide further research into the best approaches for improving the madrassa education system within the framework of existing policy. The subsequent debate provides creative alternatives to extensive madrassa reforms that could yield benefits at significantly lower costs.

Prestigious Madaris as Models:

We advocate for using model madrasas, endorsed by reputable and well-established organizations, as exemplars. Larger, well-known madrasas in cities like Lahore and Karachi can serve as role models for other institutions. They offer opportunities for students of all ages and professions, a diverse and international student body, boarding facilities, comprehensive curricula, reputable teachers, and English-language websites. These technologically advanced madrasas, which also provide computer literacy and part-time programming for non-madrasa students, aim to produce Islamic scholars who understand modern complexities and can work as academics, professionals, and leaders in both religious and secular contexts to advance Islamic society. For madrasa graduates looking to promote madrasa progress, a state-madrasa collaboration inspired by the Cambridge Muslim College, led by prominent scholar Abdal Hakim Murad, could be particularly effective. This institution offers crash courses in diverse fields ranging from politics to health and comparative religions, specifically for graduates of Islamic learning institutions (details available at www.cambridgemuslimcollege.org).

Social Integration of Madrasa Graduates:

If Islam is a social code, madrasa graduates require a well-rounded education based on Islamic values within their communities. These individuals are expected to lead the Muslim community and must understand the complexities and unique issues faced by their communities, which may differ from those in other nations. In KP Pakistan, this approach could foster a productive collaboration between the state and madrasas.

Engage with Religious Scholars and Leaders:

Establish open and constructive dialogues with religious scholars, leaders, and madrasa administrators to build trust and collaboration. Their insights and support are crucial for successful reform.

Curriculum Revisions:

Encourage madrasas to adopt a broader curriculum that integrates religious education with modern subjects such as science, math, and social studies to provide students with a well-rounded education.

Teacher Training and Quality Assurance:

Implement teacher training programs to enhance the pedagogical skills of madrasa teachers. Ensure that teachers are qualified and monitored to maintain high educational standards.

Registration and Accreditation:

Establish a robust system for registering and accrediting KP Madaris. Compliance with specific educational standards should be a requirement for registration.

Transparent Funding Mechanisms:

Ensure transparency in funding sources for Madaris to prevent misuse of funds. Government support can be linked to compliance with reform measures.

Modernization of Facilities:

Encourage the modernization of madrasa infrastructure to provide better facilities for students, including libraries, computer labs, and sports facilities.

Parental Awareness and Involvement:

Promote awareness among parents about the importance of a well-rounded education. Encourage their involvement in their children's education and decision-making.

Monitoring and Evaluation:

Implement a robust system for monitoring and evaluating the progress of madrasa reforms through regular inspections and assessments.

Legal Framework:

Develop or amend legislation to establish a legal framework for madrasa reform and accountability.

Countering Extremism:

Promote curricula that counter extremism, sectarianism, and hate speech. Develop programs that educate students on tolerance, diversity, and coexistence.

Research and Data Collection:

Conduct research to better understand the dynamics of Madaris in KP, their societal impact, and the challenges they face. This data can inform future reform efforts.

International Collaboration:

Seek support and expertise from international organizations, NGOs, and countries with experience in madrasa reform.

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Developing A Free Trade Policy Framework to Combat Contraband Goods at The Pak-Iran Border: Implications and Strategies

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Abstract:

The longstanding issue of smuggling at the Iran-Pakistan border is driven by the region's historical role as a trade hub between Central and South Asia. The porous nature of the border has facilitated cultural exchange and economic interdependence, supporting local livelihoods despite the challenges posed by contraband trade. Smuggling, exacerbated by economic disparities, regional conflict, and international sanctions, remains a persistent challenge. Efforts to control have created socioeconomic difficulties for border communities reliant on informal trade networks. This research highlights the multifaceted nature of the contraband trade issue, emphasizing the need for a comprehensive free trade policy framework. Recommendations include strengthening border security, establishing special economic zones, fostering diplomatic dialogues, creating a joint task force, encouraging regional economic collaboration, and launching public awareness campaigns. Regional and international cooperation is essential for effectively addressing the contraband trade at the Iran-Pakistan border.

Key words:

Smuggling, Iran-Pakistan Border, Free Trade Policy, Economic Disparities, Border Security

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Introduction

The problem of smuggling at the Iran-Pakistan border is not a new problem. It has existed for centuries due to various factors. The region has been a hub for trade routes between Central and South Asia, which has made it an attractive place for commerce. Trade along these routes has created a porous and dynamic border that has facilitated cultural exchange, economic interdependence, and cross-border trade for generations of local residents. The trade has played an essential role in supporting livelihoods in the region. Despite the challenges posed by the contraband goods trade, this enduring tradition continues to shape the present-day dynamics of the border region. Furthermore, the porous nature of the border has historically facilitated the flow of goods, ideas, and cultures due to the region's economic and geostrategic significance (Anees, 2023). Conversely, it has also introduced challenges in enforcing trade regulations and ensuring security.

Smuggling has been a persistent challenge for authorities in Iran and neighboring countries, driven by economic disparities, regional conflict, and international sanctions. In 2013, when international sanctions were imposed on Iran, the demand for Iranian fuel escalated on both sides of the border, leading to a significant increase in smuggling activities. The subsequent increase in fuel smuggling not only boosted the profitability of the contraband trade but also highlighted the limitations of traditional border controls (Ianchovichina et al., 2016).

This issue holds great importance for both society and policymakers due to various compelling reasons. The trade of contraband goods undermines legitimate trade, causing significant revenue losses for both nations. Moreover, it sustains shadowy networks and organized crime, leading to a pervasive sense of insecurity in the region (Albaloshi, 2013).

The border communities have always depended on cross-border trade for their economic survival. Their social structure is closely linked with the informal trade networks that have developed over many years. However, the government's efforts to control the border through fencing and other measures are now causing significant socioeconomic difficulties for these communities. The changes in trade patterns are creating new challenges that they must face (Tehsin, 2017).

Problem Statement

The Pak-Iran border is facing a persistent challenge of smuggling, which

is harming legitimate trade. The situation is further worsened by the lack of an effective trade policy, making the region vulnerable to security threats. Therefore, it is essential to develop a focused trade policy framework that promotes cooperation between the two countries, balances legitimate trade facilitation, and prevents the movement of contraband goods across the border.

Research methodology

1. How does contraband smuggling across the Pak-Iran border impact legitimate trade between the two countries?

2. What factors contribute to the ineffectiveness of the current trade policy framework in addressing contraband smuggling across the Pak-Iran border?

3. What specific measures can be incorporated into a focused trade policy framework to balance legitimate trade facilitation and curb contraband smuggling across the Pak-Iran border?

Literature Review

The Iran-Pakistan border is a dynamic region where shared economic interests coincide with formidable social and security challenges. It serves as a conduit for an enduring predicament: the contraband goods trade, which threatens economic stability and introduces significant security and social perils to both nations. Historically, the Iran-Pakistan border has been a hub of cross-border trade, with an annual trade volume exceeding $2 billion. Pakistan, a country abundant in agricultural resources, exports products like rice to Iran. Conversely, the inhabitants of Baluchistan, residing in the border region, have historically economized by obtaining Iranian food and goods from traders across the border (Khan, 2023). This cross-border trade enhances economic interactions between the countries and sustains livelihoods and local economies. The trade that thrives along the border extends far beyond mere economic sustenance; it contributes to a profound sense of shared prosperity between the people of Iran and Pakistan (Anees, 2023).

Moreover, the economic importance of this border goes far beyond transactions and trade figures; it encompasses cultural exchange, shared growth, and historical connections. It is a testament to the adaptability and resilience of these nations' border communities, who have continued to strive even in the face of a shifting economic and political landscape (Kouzehgar, 2012). Authorities on both sides of the border have initiated measures that have significantly reformulated the domain of cross-border trade. Most notably, the extensive fencing of the vast 904-kilometer-long border has introduced new intricacies into the trade equation. While this measure was primarily enacted for security reasons, it has inadvertently disrupted the

traditional trade practices that have characterized the region for generations. Simultaneously, the Pakistani authorities have amplified efforts to clamp down on traders importing items from the Iranian side (Karim, 2017). This highlights a shift towards a more controlled trade environment, aiming to curb informal trade. While understandable from a security standpoint, these measures present logistical and economic intricacies for the border communities and traders engaged in cross-border trade (Imtiaz, 2019). The local communities and traders residing near the border region face the challenge of acclimating to these shifting circumstances, where once well-trodden smuggling routes have given way to controlled monitoring checkpoints, aligning with the findings elucidated by Shah (2022).

To address the relentless challenge of unchecked smuggling of goods, Pakistan has raised the issue with Iran and emphasized the need to facilitate legal trade channels. One significant measure taken is introducing a specific order, particularly permitting barter trade with Afghanistan, Iran, and Russia for certain goods, including petroleum and natural gas. This innovative approach alleviates the pressure on Pakistan's rapidly depleting foreign reserves. Conversely, these government initiatives are not without their challenges. A significant portion, up to 35%, of the diesel sold in Pakistan has been smuggled initially from Iran. The consequences of this smuggling undermine legitimate commerce, distort prices, and impact the sustainability of domestic businesses, specifically in the energy sector (Shahid & Shahzad, 2023).

The border security situation remains a prominent concern for both Pakistan and Iran. The 900-kilometer-long border is not merely a geographical division but reflects a dynamic region brimming with economic potential and shared interests (Karim, 2017). With annual trade estimated at around $1.5 billion, the stability of the border region is of profound significance. Security challenges disrupt legitimate commerce and expose local communities to a vast range of risks. To provide coherence and legitimacy to trade activities in the region, the Commerce Ministry of Pakistan has unveiled a list of 57 eligible products under the Business-to-Business (B2B) Barter Trade Mechanism 2023. Pakistan's exports, particularly agricultural products such as rice, strengthen economic bonds, contributing substantially to economic prosperity, food security, and the sustenance of livelihoods on both sides of the border (Writer, 2023).

The Pakistani government has implemented stringent measures to clamp down on traders importing goods from the Iranian region in response to the shifting dynamics along the border. The enforcement of stricter controls highlights an evolving security domain and a concerted effort to formalize trade (Lal, 2021). The persistent illicit trade of essential commodities, including oil, gas, and petrochemical materials, casts a shadow over the

region. International sanctions have categorized the import of these materials as illicit, ultimately leading to their smuggling through undisclosed routes. The Iran-Pakistan border region has emerged as a focal point for these illegal activities, with Iranian fuel smuggling thriving despite the imposed sanctions (Ianchovichina et al., 2016). This unlawful practice of smuggling not only undermines the formal economy but also fuels an underground economy, often intertwining with organized criminal networks operating across the border. The border security situation is a cause of mutual concern for both Pakistan and Iran (Amin & Khan, 2021). The extensive border, fraught with challenges like smuggling, threatens the region's stability. While both nations seek to strengthen economic bonds through legitimate trade, they are confronted by the uncertainties caused by an unpredictable security environment. These security dynamics along the border can potentially disrupt bilateral trade volumes (Tehsin, 2017). Effective navigation of these multifaceted challenges demands a nuanced understanding of the border's economic significance and the consequences of security measures such as border fencing. Policymakers must grapple with the intricate dynamics of a region where historical trade traditions coexist with contemporary security demands. As they strive to formulate effective policies to address the contraband goods trade challenge, they must balance the imperatives of security with the necessity to sustain the economic well-being and livelihoods of the border communities (Anees, 2023).

Situational Analysis

Pakistan shares a long, porous border of 969 km with Iran. In Baluchistan, Iranian fuel, along with many other commodities including edibles, is much cheaper and more affordable than locally available products. The locals in this province are turning to smuggling due to a lack of job opportunities in the region, making fuel smuggling the sole viable means of earning a livelihood. Around 1,800 fuel stations have been identified by the government as selling smuggled oil (The Nation, 2023). Major routes used for smuggling from Iran are:

- Taftan - Nokkundi - Noshki - Basima - Surab - Khuzdar – Kurk (towards Sindh via Shahdadkot)
- Chidgai - Panjgoor - Basima - Surab - Hoshab - Lasbella - Karachi Kalat - Mastung - Dasht Bolan - Jacobabad - Sukkur – Punjab
- Balnigore (Kech) - Dasht - Hoshab - Basima - Surab (towards Quetta)
- Dasht - Hoshab - Awaran - Bela - Dureji (towards Karachi)
- Aspikahan - Mand - Balnigore - Talar - Pasni - Ormara - Hingol (toward Karachi)

Smuggling has been occurring across international borders into the province of Baluchistan for a multitude of reasons. Baluchistan is overly dependent on outdated agricultural methods, resulting in widespread poverty, as agriculture and livestock are the mainstay of the provincial economy and constitute 50% of the Provincial GDP. The absence of major industries providing employment opportunities for the youth compels poor people to resort to smuggling. Rampant poverty drives individuals to engage in smuggling to support their families. Due to the long, porous borders, the province faces the economic implications of what economists call the "border effects"—discontinuity in prices and trade at the border between countries, which necessitates smuggling. Smuggling of fuel and goods occurs on the Pak-Iran border both from land and high seas into the coastal belt of Baluchistan. The security of the Pak-Iran border is managed by the Frontier Corps (FC). Pakistan Customs has established its presence at several points along the Pak-Iran border, such as Panjgur, Mand, and BP-250, and has check-posts along the coastline to intercept smuggled goods traveling from Gwadar to Karachi.

Legal Framework
Pakistan-Iran Preferential Trade Agreement (PTA)

To promote legitimate trade between Pakistan and Iran, the two countries signed a Preferential Trade Agreement (PTA) in 2004, which came into effect in 2007. The PTA offers preferential tariffs on various goods traded between the two nations, including agricultural products, textiles, chemicals, and machinery. This agreement has helped enhance trade between both countries, amounting to $28.1 billion in 2022, a significant increase from $3.1 billion in 2006. The PTA has also diversified trade between the two countries, which was previously dominated by oil and gas. However, some critics argue that the PTA is too limited in scope, as it only covers a small number of goods and services.

The Preferential Trade Agreement (PTA) between Iran and Pakistan has not led to the expected increase in trade. This is mainly due to high import tariffs imposed by Iran on certain items, such as fruits, vegetables, cereals, leather, and footwear, which have been hindering Pakistan's exports. It is important to note that bilateral trade has been significantly in favor of Iran. Pakistan's exports to Iran have been steadily declining, as shown in Table 1, from data provided by the Observatory of Economic Complexity (OEC) spanning from 2011 to 2021.

Table 1		
Year	Exports from Pakistan to Iran	Exports from Iran to Pakistan
2021	$18 million	$614 million
2020	$3.2 thousand	$352 million
2019	$4.68 million	$502 million
2018	$124 million	$1.08 billion
2017	$162 million	$856 million
2016	$201 million	$815 million
2015	$103 million	$663 million
2014	$128 million	$909 million
2013	$185 million	$637 million
2012	$142 million	$110 million
2011	$219 million	$568 million

(Source: OEC, 2021)

The Preferential Trade Agreement between Pakistan and Iran has not resulted in the expected increase in trade. In fact, Pakistan's exports to Iran have seen a significant decline over the years, dropping from $219 million in 2011 to a meager $18 million in 2021. On the other hand, Iran's exports to Pakistan have fluctuated between $568 million and $352 million during the same period. It is worth noting that in 2018, Iran's exports to Pakistan surpassed the $1 billion mark. Pakistan's exports to Iran consist of various products, including metalworking machine parts, rice, paper, meat, chemicals, textiles, vegetables, and fruits. Conversely, Pakistan imports petroleum, gas, iron ore, hides and skins, as well as chemical products from Iran. However, there is some positive news recently, as Iran lifted restrictions on certain goods that were previously on its import ban list for trade with Pakistan in December 2021.

To understand the dynamics of Iran-Pakistan trade relations, it is essential to take into account the context of Iran's relations with the United States. Iran has faced sanctions due to its nuclear power program and other geopolitical factors. The U.S. sanctions on Iran, coupled with pressure on Pakistan to reduce trade connections with Iran, have led to a delay in the construction of

Pakistan's segment of the Iran-Pakistan gas pipeline. In response to the situation, Iran has expressed its intention to impose an $18 billion penalty if the project remains unfinished by March 2024. Given Pakistan's energy deficiency, the country imported refined and crude oil totaling $6.462 billion in 2020 and expensive liquefied natural gas (LNG) valued at $3.4 billion in 2021, primarily from Qatar.

Another issue negatively impacting trade is the absence of banks in each other's capitals. Pakistan has already acceded to Iran's request to open a branch in Karachi; however, Iran has been reluctant to extend the same facility to Pakistan in their territory. Due to U.S. sanctions on Iran, Pakistani commercial banks are cautious about engaging in financial transactions with their Iranian counterparts. This cautious approach creates challenges for business communities in both nations, primarily due to the absence of a reliable payment mechanism. Consequently, these challenges contribute to the prevalence of illegal and undocumented trade, fostering smuggling activities across borders. The lack of banking facilities becomes a significant hindrance to legitimate trade.

One of the most formidable challenges along the Iran-Pakistan border is the illicit trade of indispensable commodities like oil, gas, and petrochemical materials (Ianchovichina et al., 2016). This illicit commerce is primarily a consequence of global sanctions imposed on Iran, classifying the import of these materials as unlawful. As a result, a substantial portion of these essential resources is smuggled via covert routes and not from formal trade channels (DAWN.COM, 2023). Furthermore, Iranian fuel smuggling, in particular, has thrived as an exceedingly profitable business for decades, establishing its presence on both sides of the border. The importance of this issue intensified following the imposition of U.S. sanctions on Iran in 2013. These sanctions, originally designed to curb Iran's economic activities, inadvertently fueled the expansion of this illegal trade, making it a cornerstone of the regional economy (Ianchovichina et al., 2016).

The Joint Trade Committee (JTC) is a bilateral organization that convenes regularly to discuss trade-related matters and explore ways to enhance trade relations between Iran and Pakistan. The JTC has played a pivotal role in resolving trade disputes and promoting trade between the two countries. Additionally, the JTC has been actively involved in developing new trade initiatives, including the barter trade agreement between Iran and Pakistan.

Barter Trade Agreement

Iran and Pakistan entered into a barter trade agreement that will take effect in May 2023. Under the agreement, Pakistani goods and services can be exchanged for Iranian oil imports. Trade between Iran and Pakistan is anticipated to increase as a result of the barter trade, as it will lessen Pakistan's

reliance on foreign oil imports. By avoiding the need for foreign exchange and lowering reliance on the US dollar, barter trade has the potential to greatly increase trade between Pakistan and Iran. This could lessen their reliance on the US dollar, which can be a volatile currency subject to sanctions, and increase economic growth and cooperation between the two nations.

However, from a logistical perspective, barter trade can be challenging. To ensure fair and transparent transactions, careful matching of goods and services as well as substantial documentation are needed. Potential conflicts and administrative expenses may arise as a result. It can be difficult to find appropriate matches between Iranian and Pakistani goods for barter trade because of variations in market preferences, demand trends, and production capacities. This might restrict the range of trade in barter.

Besides the trade policies listed above, Iran and Pakistan are also members of the following regional economic organizations:

- The Economic Cooperation Organization (ECO)
- The Organization of Islamic Cooperation (OIC)
- The South Asian Association for Regional Cooperation (SAARC)

Membership in these organizations can facilitate trade between Iran and Pakistan by providing a forum for regional economic cooperation and by reducing trade barriers.

Stakeholder Analysis
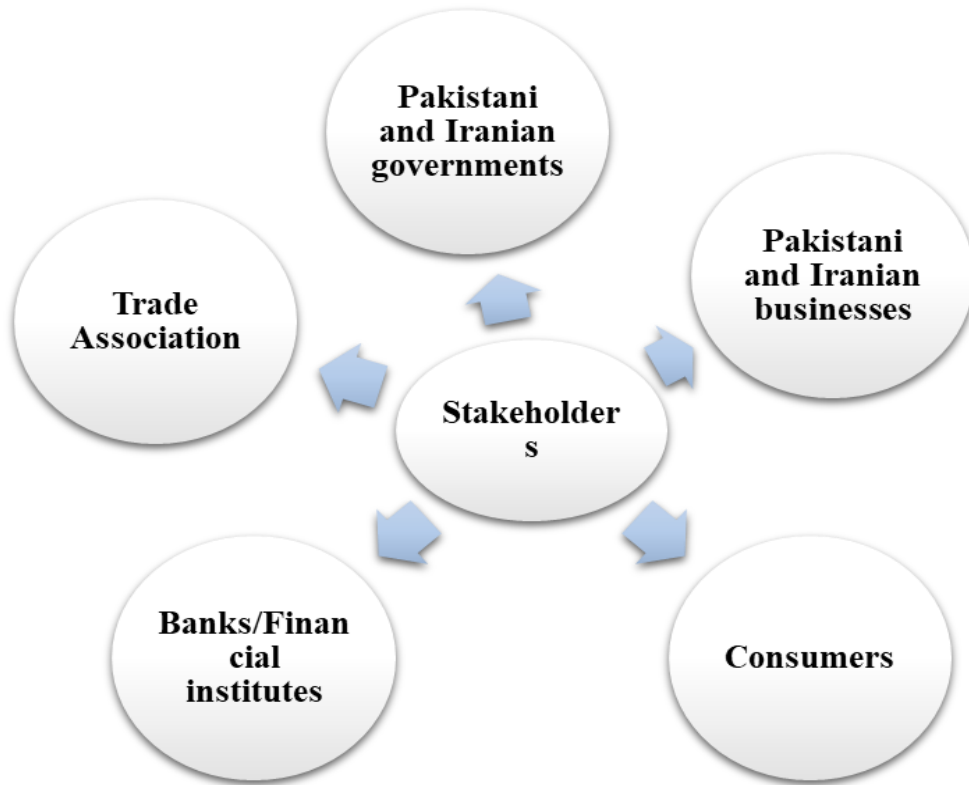
Stakeholder Interests		Power	Role
Pakistani and Iranian governments	Circumventing US sanctions on Iran, promoting economic cooperation, and diversifying trade routes to reduce reliance on the US dollar.	Have the ultimate authority to approve or reject trade agreement Can influence the terms of the agreement	Formulate trade policies to promote economic cooperation between both the countries
Pakistani and Iranian businesses	To access new marketsand expand their sales reduce reliance on imported goods new sources of financing	Can decide whether or notto participate in trade agreement Can influence the direction of trade agreement	To convince both the governments to open markets and provide easy access

		Can lobby the governments to support their interests	
Consumers	To access lower-pricedgoods To enjoy greater productdiversity	Can influence the demand for goods that are traded under the barter trade agreement	Can complain to the governments if they are unhappy with the effectsof trade agreement
Banks and fina ncial institutions	To generate new business opportunities To develop new products and services	Can provide or deny financing to businesses engaged in trade	Can influence the development of new trade finance products
Trade associations	To provide their members with essential information and support To promote the barter trade agreement among their members	Can educate their members about trade agreement Can provide support to businesses that are engaged in trade	To provide support to the government and conduct Public awareness campaigns

Gap Analysis of Existing Preferential Trade Agreement

A gap analysis of the Pakistan-Iran Preferential Trade Agreement (PTA) can identify areas where the agreement can be improved to better achieve its objectives.

Current State	Desired State	Gap
PTA only covers a limited number of goods, covers only 500 goods	Widening the scope and inclusion of more items	Expand the scope of the PTA or introduce an FTA or another bilateral trade policy
PTA does not address non-tariff barriers to trade, such astechnical barriers to trade (TBTs) and sanitary and phytosanitary (SPS) measures	Address non-tariff barriers	To negotiate provisions to address TBTs and SPS measures

PTA lacks a formal dispute settlement mechanism	Establish a dispute settlementmechanism	Develop a formal dispute settlement mechanism to resolve trade disputes efficiently and fairly
PTA does not provide adequate protection for investments from Iran and Pakistan in each other's markets	Enhance investment protection, Promote trade facilitation, Strengthen institutional cooperation	Strengthen investment protection provisions to encourage investment flows Implement measures to streamline customs procedures and reduce the time and cost of trade Enhance cooperation between relevant institutions in Iran and Pakistan to facilitate the implementation and monitoring of the PTA

SWOT Analysis

A SWOT analysis can help dissect the intricate issue of contraband goods trade at the Iran-Pakistan border and provide a comprehension of the external and internal factors that can impact the direction of the policy framework.

Strengths

- A paramount strength lies in the shared interests of both Iran and Pakistan in addressing the challenge of contraband trade.

- Common objective of enhanced security and economic prosperity in the border region.

- Potential for regional and international cooperation.

- Participation in regional forums and global organizations.

- Combined efforts of multiple stakeholders for comprehensive solutions.

Weaknesses

- The inherent vulnerability in border security due to its porous nature

and limited resources. The porous nature of the Iran-Pakistan border, compounded by limited resources at checkpoints, introduces substantial vulnerabilities that illegal traders exploit (Karim, 2017).

- Regulatory and legal gaps that provide opportunities for contraband trade to flourish. Both nations grapple with regulatory and legal gaps, representing significant weaknesses in the current framework (DAWN, 2023).

- Lack of mandatory regulatory reforms and legal improvements. Without mandatory regulatory reforms and legal improvements, the battle against contraband trade remains an uphill struggle.

Opportunities

- Strengthening border security is crucial for mitigating vulnerabilities and enforcing legal trade regulations.

- Strategic investments in increased personnel, advanced surveillance technology, and capacity-building for law enforcement agencies can significantly enhance border security capabilities.

- Economic integration offers a promising opportunity to address contraband goods-related activities.

- Encouraging trade and economic cooperation among provinces and states can stimulate economic growth and shared prosperity in both regions.

- Regional integration initiatives can foster stronger economic ties, making legitimate trade more attractive to communities. • Economic integration serves as both an opportunity and a potential solution to the contraband goods challenge.

Threats

- The persistence and adaptability of illicit networks operating in the region pose a significant threat.

- These networks have shown remarkable resilience, continuously adapting their operations to circumvent enforcement initiatives.

- Their resilience makes eradicating the contraband trade an ongoing challenge, requiring constant vigilance. • Policymakers must innovate to disrupt contraband goods networks and effectively control illicit trade.

- Resistance to change, whether due to vested interests, deeply ingrained

practices, or a lack of awareness, poses a substantial threat to policy implementation.

- Overcoming resistance to change is crucial for successful policy implementation.

- Failure to address this can hinder progress and impede the achievement of overarching policy goals.

Comparative analysis
The ASEAN Free Trade Area (AFTA) and Its Impact on Smuggling

The ASEAN Free Trade Area (AFTA) was established in 1992 among the 10 member states of the Association of Southeast Asian Nations (ASEAN): Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. The agreement aims to promote economic growth and integration within the region by reducing tariffs and non-tariff barriers to trade. AFTA's implementation has significantly contributed to economic growth in ASEAN countries. According to the ASEAN Secretariat, the region's GDP increased by an average of 5.2% annually between 2010 and 2020. Additionally, AFTA has facilitated trade flows within the region, with intra-ASEAN trade increasing from 25% of total ASEAN trade in 2002 to 40% in 2020. AFTA has also had a positive impact on efforts to combat smuggling of goods such as cigarettes, alcohol, and pharmaceuticals in the region (ASEAN Secretariat, 2019).

According to a report, the prevalence of illicit cigarettes in ASEAN declined from 18% in 2009 to 12% in 2019. This decline is attributed in part to AFTA's measures to reduce tariffs on legal cigarettes and strengthen border controls (WHO, 2020). According to the International Rice Research Institute (IRRI), rice smuggling in ASEAN has declined by approximately 20% since the implementation of AFTA. This reduction is attributed to the elimination of tariffs on rice trade within the region, which has made it less profitable to smuggle rice across borders.

Similarly, the volume of illicit alcohol consumed in ASEAN declined by 10% between 2010 and 2017 due to the harmonization of customs procedures and increased cooperation between customs authorities (ICAP, 2018). A 2021 report by the International Pharmaceutical Manufacturers & Associations (IFPMA) found that the value of counterfeit and substandard medicines in ASEAN declined by 15% between 2015 and 2020. This decline is attributed in part to AFTA's measures to improve regulatory oversight and consumer awareness. The International Sugar Organization (ISO) estimates that sugar smuggling in ASEAN has declined by around 30% since AFTA came into effect. The International Energy Agency (IEA) reports that fuel smuggling in

ASEAN has fallen by an estimated 40% since the implementation of AFTA.

These figures demonstrate the positive impact of AFTA on combating smuggling in specific countries within ASEAN. For instance, in Indonesia, the prevalence of illicit cigarettes declined from 29% in 2009 to 11% in 2019. Similarly, in Thailand, the volume of illicit alcohol consumed declined by 20% between 2010 and 2017.

Conclusion

The extensive exploration of the border region uncovered a multifaceted tapestry of complexities and nuances. The contraband goods trade issue, involving a diverse range of illicit items, casts a profound shadow over the economies and security of Iran and Pakistan. Weaknesses in border security and the existence of legal and regulatory gaps exacerbate the persistence of this challenge. Nevertheless, a glimmer of hope emanates from the shared interests between both nations and the potential for regional and global cooperation. Moreover, the urgency of addressing the issue of contraband goods at the Iran-Pakistan border is an immutable reality. Each passing day that contraband trade remains unchecked extracts significant economic revenues, bolsters criminal enterprises, and imperils regional security. Procrastination only allows more time for illicit networks to strengthen their operations and deepen the challenge. To effectively confront the multifaceted issue of contraband goods trade, a comprehensive free trade policy framework is imperative. Such a framework is not a static document but a dynamic, evolving vision—a plan encompassing a holistic strategy, including heightened border security measures, streamlined trade facilitation procedures, regional integration endeavors, diplomatic initiatives, and public awareness campaigns. Additionally, it recognizes the indispensable role of global and regional collaboration as a potential force multiplier for success. Furthermore, this comprehensive free trade policy framework is not just a roadmap but a compass that guides Iran and Pakistan toward a shared future of security and prosperity. It envisions a future where the Iran-Pakistan border emerges as a symbol of cooperation and a conduit for collective success.

Recommendations

1. In the face of the intricate and pressing issue of contraband goods trade at the Iran-Pakistan border, a strategic set of policy recommendations emerges. These recommendations encompass both short-term and long-term strategies, aiming to address the issue comprehensively. It is crucial to navigate this complex terrain while being mindful of the distinctive challenges and opportunities inherent to the border region.

2. In the short term, it is strongly recommended to promptly strengthen border security by augmenting personnel and enhancing the allocation of additional resources at border checkpoints. This includes the swift deployment of additional personnel and the incorporation of advanced surveillance technology to substantially improve the monitoring and control of the border. The potential benefits of implementing this short-term measure are significant. Immediate reinforcement of border security serves as a robust deterrent against contraband trade, making it less appealing to illicit traders. The increased presence of personnel and the adoption of advanced surveillance technology ensure more efficient and vigilant border management, leading to higher confiscation rates, reduced illicit activities, and an overall strengthening of the border's security infrastructure. This measure forms a foundational building block for establishing a secure and resilient border.

3. Another significant strategic recommendation involves establishing cross-border trade zones or special economic zones. This multifaceted measure requires substantial efforts, including infrastructure development, meticulous strategic planning, and collaborative engagement with diverse stakeholders. The potential advantages of establishing these zones over the long term are considerable. They act as catalysts for economic growth, offering employment opportunities and fostering the expansion of legitimate trade activities.

4. Another short-term recommendation emphasizes the importance of diplomatic dialogues between Iran and Pakistan, including regular meetings, negotiations, and discussions. These dialogues focus on trust-building, collaboration, and policy agreements, aiming to swiftly enhance bilateral relations and address the challenge of contraband trade. They lay the groundwork for fruitful cooperation, promoting mutual understanding and trust while establishing shared visions and goals for combating illegitimate trade in the short term.

5. Conversely, the long-term recommendation advocates establishing a dedicated joint task force focused on combating contraband. This initiative includes legal agreements, resource allocation, and operational coordination, underscoring a substantial and long-lasting commitment. Over the long term, the joint task force embodies exceptional cross-border cooperation and intelligence sharing.

6. Another short-term recommendation highlights the importance of encouraging trade and economic collaboration among bordering provinces and states, focusing on the need for active engagement from regional authorities. This initiative involves removing trade barriers and facilitating cross-border economic activities in the short term. The

potential benefits of this approach are substantial, as it stimulates regional integration, leading to immediate economic growth, employment opportunities, and enhanced economic stability. Additionally, it fosters cross-border economic collaboration, strengthening the bonds between neighboring regions and facilitating shared prosperity. Collectively, these outcomes contribute to a more resilient and stable border region.

7. Another short-term recommendation is the launch of public awareness campaigns as a significant strategy to counter contraband trade and mitigate the illicit trade of tobacco. These campaigns include developing educational materials, engaging with the community, and utilizing diverse communication channels to effectively disseminate information about the risks associated with contraband trade.

8. Furthermore, regional and international collaboration stands as a linchpin for the effective execution of these recommendations. Collective cooperation with neighboring nations, active participation in regional forums, and seeking support from global organizations are paramount for effectively addressing contraband trade at the Iran-Pakistan border. Regional forums act as a pivotal platform for joint operations, intelligence sharing, and coordinated efforts, playing an indispensable role in controlling the trade of contraband goods. International organizations also provide essential resources, including financial assistance, technological expertise, and training, which enhance the enforcement capabilities necessary to combat contraband trade. This collaborative and coordinated strategy fosters a more resilient, comprehensive, and sustainable approach to addressing this critical issue in the border region.

Proposed policy framework

A proposed framework for the Pakistan-Iran Free Trade Agreement, based on the ASEAN FTA, is set out below:

Scope and Coverage

Goods: To eliminate tariffs and other trade barriers significantly, the FTA should cover all goods traded between Pakistan and Iran.

Services: Trade in services, which includes various sectors such as professions, finance, and transport services, should be covered by the Free Trade Agreement.

Investment: The Free Trade Agreement should set out clear and transparent rules for investors, including provisions on nondiscrimination, national treatment, and protection against expropriation.

Intellectual Property Rights (IPR): The FTA should address IPR protection, including copyrights, trademarks, patents, and geographical indications.

Tariff Elimination

Tariff Schedule: A tariff reduction schedule, outlining the time frame and modalities for abolishing tariffs on goods traded between Pakistan and Iran, should be included in the Free Trade Agreement.

Specific and Differential Treatment (S&DTs): The Free Trade Agreement should incorporate specific and differential treatment measures to address the varying levels of economic development in Pakistan and Iran. This may include extended periods for the elimination of tariffs and exemptions for certain important products.

Rules of Origin: The FTA should establish clear and straightforward rules of origin to determine which products qualify for special treatment.

Non-Tariff Barriers (NTBs)

Technical Regulations and Standards: The FTA should harmonize specialized controls and benchmarks to reduce non-tariff measures (NTMs) and encourage trade.

Sanitary and Phytosanitary (SPS) Measures: The FTA should establish a framework for cooperation on SPS measures to ensure food safety and protection of animal and plant health.

Customs Procedures: The FTA should streamline customs procedures to facilitate smooth cross-border trade.

Other Provisions

Dispute Settlement Mechanism: To resolve trade disputes between Pakistan and Iran, the FTA should establish an open and efficient dispute resolution mechanism.

Trade Facilitation: The Free Trade Agreement (FTA) should include clauses that promote trade facilitation, such as paperless trade, electronic customs clearance, and streamlined customs processes.

Economic Cooperation: The Free Trade Agreement (FTA) should foster economic collaboration between Pakistan and Iran in areas such as technology transfer, infrastructure development, and tourism.

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