



Development Dialogue (Dhaka)

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Proceedings of the

NADA 1ST DEVELOPMENT DIALOGUE

“Accelerating Inclusive Development Through Effective Development Administration for a Prosperous Bangladesh.”

31st May 2025, Saturday - 1st June 2025, Sunday
Dhaka, Bangladesh



**NATIONAL ACADEMY FOR DEVELOPMENT ADMINISTRATION (NADA)
MINISTRY OF PUBLIC ADMINISTRATION**



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Peer Review Statement

All papers included in the Development Dialogue (Dhaka): Proceedings of the 1st Development Dialogue were subjected to a rigorous peer review process prior to acceptance. Each submission was evaluated by at least two independent reviewers with expertise in the relevant field. The review process was conducted in accordance with established academic standards, ensuring that:

- Papers were assessed for originality, relevance, methodological rigor, and contribution to the field.
- Reviews were conducted in a double-blind manner (reviewers and authors did not know each other's identities).
- Recommendations from reviewers were carefully considered by the editorial team before final decisions were made.

This peer review process reflects our commitment to uphold the integrity, quality, and scholarly value of the conference proceedings.

**-The Editorial Team of the Development Dialogue (Dhaka):
Proceedings of the 1st Development Dialogue.**

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Preface

The 1st Development Dialogue, held from 31 May to 1 June 2025, marks a significant milestone in the journey of the National Academy for Development Administration (NADA) toward becoming a premier hub for knowledge, training and policy discourse in Bangladesh.

Conceived as a platform for structured reflection and evidence-based dialogue, this inaugural event focused on the theme:

“Accelerating Inclusive Development Through Effective Development Administration for a Prosperous Bangladesh.”

The Dialogue sought to bring together policymakers, senior civil servants, academics and development partners to exchange insights on how Bangladesh’s development administration can adapt to the evolving challenges of governance, economic growth, climate resilience and human resources development.

This volume, the Conference Proceedings of the 1st Development Dialogue, documents the rich deliberations of the two-day event. It captures the inaugural and closing ceremonies, keynote address, technical sessions and the cross-cutting outcomes that emerged from the discussions. Importantly, it also sets out key recommendations that will inform future policymaking and administrative reforms, while laying the groundwork for subsequent Dialogues.

The proceedings reflect not only the intellectual contributions of the participants but also the collaborative effort of NADA’s faculty, staff and partners. We express our deepest gratitude to former Rector, Dr. Md. Shahidullah, whose vision, foresight and commitment led to the conception of this Dialogue and laid the foundation for its success. We also thank Member Directing Staff (Administration), Dr. A. B. M. Mahbub Alam, who, as Chair of the Steering Committee, provided steadfast leadership, strategic guidance and tireless coordination to ensure the event’s quality and coherence. Finally, we extend our sincere appreciation to present Rector, Dr. A. K. M Shahabuddin, whose support and encouragement have brought this process to a successful conclusion through the publication of these proceedings, ensuring that the Dialogue’s insights are preserved and disseminated for lasting impact.

We also extend our gratitude to the Advisory and Steering Committees, paper presenters, discussants, rapporteurs and the NADA Secretariat, without whom this Dialogue would not have been possible.

The Editorial Team extends its heartfelt appreciation to all reviewers whose expertise and thoughtful feedback contributed significantly to the academic rigor and overall quality of this publication.

It is our hope that this publication will serve as a valuable resource for practitioners, researchers and policymakers working to advance inclusive development through effective governance in Bangladesh and beyond.

On behalf of the Editorial Team of Development Dialogue (Dhaka): Proceedings of the 1st Development Dialogue, National Academy for Development Administration (NADA):



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The **1st Development Dialogue**, held on 31 May–1 June 2025, marked a historic milestone for the **National Academy for Development Administration (NADA)**. Conceived as a pioneering platform to bring together policymakers, civil servants, researchers and development partners, the Dialogue was designed to foster structured reflection, evidence-informed discussions and cross-sectoral learning on the pressing challenges of development administration in Bangladesh.

Anchored in the theme *“Accelerating Inclusive Development Through Effective Development Administration for a Prosperous Bangladesh”*, the Dialogue addressed critical dimensions of governance, project management, social protection, climate resilience and the integration of technology and innovation in the public sector.

The deliberations underscored the urgent need to enhance institutional capacity, strengthen policy coherence and invest in people-centered and future-ready development administration. Participants engaged in insightful exchanges through keynote addresses, scholarly paper presentations, panel discussions and open forums, contributing to a rich tapestry of ideas and recommendations.

This inaugural Dialogue signifies the beginning of a recurring process of knowledge creation and policy innovation at NADA. As we move forward toward the **2nd Development Dialogue**, the outcomes of this first convening will serve as a foundation for building stronger administrative practices and more inclusive governance structures in Bangladesh.

On behalf of NADA, I extend my deepest gratitude to all the distinguished guests, paper presenters, discussants and participants who contributed to the success of this Dialogue. I also acknowledge the dedicated efforts of the Advisory and Steering Committees in making this event possible.

Together, let us continue to bridge thought and transformation, ensuring that development administration remains a driving force for an equitable and prosperous Bangladesh.

Rector's Note

It is with great pleasure and a deep sense of institutional pride that I write this note for the publication of the proceedings of the **1st Development Dialogue**, organized by the National Academy for Development Administration (NADA) and held on **31 May - 1 June 2025** at our campus in Dhaka. Although I assumed office as Rector after this landmark event took place, I have followed with keen interest the journey of its conception, design and successful execution. I am delighted to see that the rich discussions, presentations and reflections from those two days have now been meticulously compiled in this volume, ensuring that the insights generated will continue to inform and inspire long after the Dialogue itself has concluded.

The 1st Development Dialogue was not just another event in our calendar—it was a pioneering exercise in building a **structured platform for research-policy engagement** in the field of development administration. For far too long, our administrative practice and our academic research have run on parallel tracks, intersecting only occasionally and often in an ad hoc manner. The Dialogue sought to change this. By bringing together senior policymakers, administrators, academics, researchers and development partners under one roof, it created a rare opportunity for open exchange of ideas across professional boundaries.

The chosen theme—“**Accelerating Inclusive Development through Effective Development Administration for a Prosperous Bangladesh**”—could not have been more timely. Bangladesh stands at a critical juncture in its development journey. The progress of the past decades in poverty reduction, economic growth and human development is undeniable. Yet, we also face mounting challenges: the pressures of rapid urbanization, the existential threat of climate change, the need to create meaningful employment for our youthful population, the imperative of gender equality and the demand for governance systems that are transparent, accountable and responsive to citizen needs. These challenges require not only sound policy but also an **administrative machinery that is capable, adaptable and visionary**.

The Dialogue's sub-themes reflected this multidimensionality. They ranged from governance and institutional strengthening to inclusive growth strategies, from sustainable development and resilience to innovation in public service delivery, from economic governance to human capital development and forward to the future-oriented domains of artificial intelligence and big data. Each paper presented and discussed during the Dialogue touched on a crucial element of the puzzle and together, they painted a holistic picture of what effective development administration entails in the 21st century.



Reading through the summaries and transcripts compiled in this volume, I am struck by the **depth of analysis** and the **practical relevance** of the contributions. The paper on the impact of social protection on household savings behavior, for example, offers actionable insights for designing cash transfer programs that not only address immediate needs but also build long-term resilience. The discussion on artificial intelligence and big data illustrates how emerging technologies can transform decision-making in public administration—provided we address the challenges of infrastructure, skills and data governance. The exploration of motivational drivers among Bangladesh Civil Service officials raises important questions about talent management, specialization and aligning postings with expertise to enhance performance.

What makes this Dialogue particularly valuable is that it was not confined to academic theory. The sessions were enriched by the perspectives of discussants who brought

decades of experience from the field, as well as by the active engagement of participants who are themselves practitioners in various branches of government. This combination of scholarly research and practical wisdom is, in my view, the essence of **applied policy dialogue**.

The importance of such an event for NADA cannot be overstated. As the nation's premier institution for training and capacity building in development administration, NADA has a responsibility not only to train but also to **generate and disseminate** knowledge. The Development Dialogue is a natural extension of that mandate. It positions NADA not just as a training academy, but as a **think tank**—a place where ideas are tested, evidence is debated and solutions are co-created.

Moreover, by institutionalizing the Dialogue as an annual or biennial event, we create continuity. Each edition can build upon the findings of the previous one, track progress and adapt to emerging issues. The **roadmap to the 2nd Development Dialogue**, already being discussed, will benefit immensely from the documented learnings in this volume. This kind of institutional memory is invaluable; without it, good ideas risk being forgotten and challenges risk being re-discovered rather than resolved.

Another reason I welcome this publication is its potential to **extend the reach of the Dialogue beyond those who were physically present**. The 1st Development Dialogue was attended by a distinguished group, but the issues it addressed concern the entire civil service, academia and policy community in Bangladesh and beyond. By making the proceedings available, we allow other institutions, researchers and practitioners—both domestic and international—to engage with the findings. This can spark further research collaborations, inform training curriculum and shape policy reforms.

The publication also serves as a **testament to collaboration**. The successful organization of the Dialogue was the result of tireless work by multiple teams: the Advisory and Steering Committees, the Publications Wing, the administrative staff and the faculty who moderated and facilitated sessions. It also benefited from the generosity of our Chief and Special Guests, keynote speaker, paper presenters, discussants and participants, all of whom gave their time and expertise to make the event meaningful.

On a more personal note, as the current Rector of NADA, I feel a profound sense of continuity with my predecessors who initiated and supported this endeavor. Dr. Md. Shahidullah, who served as Rector during the Dialogue and Dr. A. B. M. Mahbub Alam, who chaired the Steering Committee, deserve particular credit for their vision and leadership. It is now my responsibility to ensure that the momentum they generated is sustained and amplified.

Looking ahead, I see several ways in which the legacy of the 1st Development Dialogue can be deepened:

- **Embedding research outputs into training programs** so that the next generation of civil servants is equipped with cutting-edge knowledge.
- **Strengthening follow-up mechanisms** to track the implementation of recommendations emerging from the Dialogue.
- **Expanding the scope of participation** to include more voices from local government, civil society and the private sector, thereby enriching the diversity of perspectives.
- **Leveraging digital platforms** to share insights in real time and invite contributions from a broader audience.

In conclusion, the publication of this conference proceeding is more than a record of what was said and done over two days in May and June 2025. It is a living document—a repository of ideas, evidence and commitments that can guide our collective efforts to build a more inclusive, resilient and prosperous Bangladesh. I commend all those involved in its preparation and encourage readers to engage deeply with its contents. The challenges before us are great, but so too is our capacity to meet them when we work together, guided by knowledge, integrity and a shared vision for the future.

Let this volume be both a marker of achievement and a call to action. May it inspire further dialogue, informed policymaking and a renewed dedication to the principles of effective development administration.

Dr. A. K. M Shahabuddin
Rector

National Academy for Development Administration (NADA)



Acknowledgements

The successful organization of the 1st Development Dialogue was the outcome of a collective endeavor, enriched by the vision, expertise and commitment of many distinguished individuals and institutions.

We are deeply indebted to **former Rector, Dr. Md. Shahidullah**, whose foresight and leadership first envisioned the concept of this Dialogue as a platform to bridge research, policy and practice in development administration. Our sincere appreciation also goes to **Member Directing Staff (Administration), Dr. A. B. M. Mahub Alam**, who, as Chair of the Steering Committee, steered the planning process with strategic acumen, ensuring that the Dialogue's objectives were met with clarity and purpose. We are equally grateful to **present Rector, Dr. A. K. M Shahabuddin**, for his unwavering support in bringing the proceedings to publication, thus securing the long-term value of the event's insights for policy and practice.

We acknowledge with thanks the contributions of our **Chief Guest at the Inaugural Ceremony, Mr. Iqbal Abdullah Harun, Secretary, Planning Division** and **Special Guest, Mr. A N M Moinul Islam, Additional Secretary, CPT, Ministry of Public Administration**, whose perspectives on strategic planning and public administration reform set a constructive tone for the Dialogue. We also extend our gratitude to **Keynote Speaker, Dr. Niaz Ahmed Khan, Vice Chancellor, University of Dhaka**, for delivering a thought-provoking address that integrated global development discourse with Bangladesh's policy realities.

We further thank the **Chief Guest at the Closing Ceremony, Mr. Rezaul Maqsud Jahedi, Secretary, Local Government Division** and **Special Guest, Mr. Muhammed Ali Armagan, Country Coordinator, Turkish Cooperation and Coordination Agency (TIKA)**, for their reflections on decentralization, local governance and the importance of international partnerships in development administration.

Our appreciation is extended to the **Advisory and Steering Committees** for their meticulous efforts in curating themes, selecting papers and ensuring intellectual rigor in every session. We recognize the dedicated work of the **Conference Secretariat**, especially the Publications Wing and the logistics and administrative teams, whose behind-the-scenes coordination ensured seamless execution.

Finally, we wish to thank all **paper presenters, discussants, moderators, rapporteurs and participants** for their active engagement, candid insights and constructive debates. Their contributions transformed the Dialogue into a vibrant space for knowledge exchange and collective problem-solving, reaffirming NADA's role as a hub for policy innovation and professional development. We sincerely thank the peer reviewers for their valuable contributions. Their efforts have ensured the academic rigor and quality of this publication.



List of Abbreviations

ADB	– Asian Development Bank
AI	– Artificial Intelligence
BBS	– Bangladesh Bureau of Statistics
BCS	– Bangladesh Civil Service
BIGD	– BRAC Institute of Governance and Development
BPATC	– Bangladesh Public Administration Training Centre
BUBT	– Bangladesh University of Business and Technology
CPD	– Centre for Policy Dialogue
DOI	– Digital Object Identifier
GED	– General Economics Division
ICT	– Information and Communication Technology
IPF	– Institute of Public Finance
JICA	– Japan International Cooperation Agency
KPI	– Key Performance Indicator
LDC	– Least Developed Country
MDS	– Member Directing Staff
MoPA	– Ministry of Public Administration
NADA	– National Academy for Development Administration
NGO	– Non-Governmental Organization
PFM	– Public Financial Management
PPP	– Public-Private Partnership
RTI	– Right to Information
SDG	– Sustainable Development Goal
TIKA	– Turkish Cooperation and Coordination Agency
UN	– United Nations
UNCDF	– United Nations Capital Development Fund
UNDP	– United Nations Development Programme
UNOPS	– United Nations Office for Project Service



Executive Summary

The 1st Development Dialogue, organized by the National Academy for Development Administration (NADA) on 31 May–1 June 2025, marked the launch of a landmark institutional platform in Bangladesh for structured engagement between senior policymakers, civil servants, academics and development partners on the evolving role of public administration in achieving inclusive and sustainable growth. Anchored in the theme “*Accelerating Inclusive Development Through Effective Development Administration for a Prosperous Bangladesh*,” the Dialogue comprised an inaugural ceremony, keynote address and a series of thematic technical sessions featuring peer-reviewed papers, expert discussants and interactive exchanges.

The inaugural session underscored the urgency of aligning administrative capabilities with the nation’s development aspirations. Speakers emphasized that effective development administration must integrate evidence-based policymaking, robust monitoring frameworks and citizen-centric service delivery. The keynote address contextualized Bangladesh’s development trajectory within global transitions, highlighting opportunities in digital transformation, climate resilience and regional cooperation, while cautioning against risks from governance gaps, resource misallocation and uncoordinated policy execution.

Across the two days, technical sessions produced rich insights. Papers explored diverse domains—from strengthening institutional capacity in project management, improving public procurement efficiency and enhancing inter-ministerial coordination, to

embedding climate action in development planning and leveraging technology for service innovation. Discussions revealed common cross-cutting themes:

- The need for adaptive, skill-based training for public officials, with a stronger focus on analytical, negotiation and ICT capabilities.
- Institutional reforms to streamline decision-making and improve vertical and horizontal coordination across government tiers.
- Mainstreaming sustainability and climate considerations into all stages of policy and project cycles, particularly under SDG 13.
- Expanding collaborative governance through public-private partnerships, academia-policy linkages and international cooperation.
- Embedding transparency, accountability and value-for-money principles in public investment management.

Participants identified that NADA, as a specialized institution, is uniquely positioned to serve as both a knowledge hub and a catalyst for implementing these recommendations through its training, research and thought-leadership functions. The Dialogue concluded with a consensus on institutionalizing this forum as an annual fixture, ensuring that research findings and practitioner insights directly inform national policy agendas. The outcomes will guide NADA’s future programs, foster greater policy coherence and strengthen Bangladesh’s capacity to respond to complex development challenges with agility, inclusiveness and innovation.

Findings at a Glance

- **Capacity Development:** Urgent need for adaptive, skill-based training for public officials—emphasizing analytical, negotiation and ICT capabilities.
- **Institutional Reform:** Streamline decision-making processes; strengthen vertical and horizontal coordination across government tiers.
- **Sustainability Mainstreaming:** Integrate climate action, disaster risk reduction and environmental safeguards into all policy and project cycles (SDG 13 focus).
- **Collaborative Governance:** Enhance public-private partnerships, academia-policy linkages and international cooperation for development effectiveness.
- **Public Investment Efficiency:** Ensure transparency, accountability and value-for-money in planning, budgeting and procurement.
- **Role of NADA:** Position NADA as a national knowledge hub and catalyst for implementing reform recommendations through training, research and thought leadership.
- **Institutionalization of Dialogue:** Establish the Development Dialogue as an annual platform for evidence-based policy exchange and practitioner-researcher collaboration.



About NADA

The National Academy for Development Administration (NADA) is a modern, state-of-the-art training institution under the Ministry of Public Administration of Bangladesh. Established to address the evolving challenges of governance and development, NADA aims to create a pool of competent, visionary and skilled civil servants who are equipped to lead and manage development initiatives across sectors. The academy is strategically located in Rupnagar, Mirpur, Dhaka with easy access to major government offices, making it a central hub for training, research and capacity-building.

NADA's vision is to become a center of excellence in administrative transformation and sustainable development through human resource development. Its mission includes imparting quality training, fostering research, encouraging strategic studies and promoting continuous professional learning.

With this framework, NADA designs and delivers training programs tailored to the evolving needs of Bangladesh's public sector, focusing particularly on development administration, planning, project management and strategic governance.

Among NADA's core offerings are its three flagship courses: Development Administration (DA), Sustainable Development and Project Management (SDPM) and Leadership and Strategic Management (LSM). These programs are carefully structured to serve different tiers of civil servants—from entry-level officers to joint secretaries—integrating theoretical knowledge with hands-on practical learning. Specialized modules cover topics such as economics, public procurement, international trade, infrastructure development and negotiation of international contracts. The DA course, for example, uniquely fills the skill gap created after the merger of the Economic and Administration cadres, equipping BCS Administration officers with analytical and technical expertise in development functions.

The institution also stands out for its comprehensive infrastructure. Housed in a 13-storeyed building, NADA boasts modern classrooms, seminar halls, an auditorium containing more than 350 seats, a language lab, computer lab, gymnasium, dormitories and a rooftop swimming pool. It hosts a wide range of facilities to ensure not only academic rigor but also physical and mental well-being. Furthermore, the academy fosters global linkages through collaborations with international entities such as JICA, TIKA, KOICA etc., enhancing its training relevance through exposure to international best practices.

Beyond training, NADA is emerging as a think tank, aiming to publish research through its journal *Development Administration Review* and conducting strategic studies to inform policy. Its leadership is committed to innovation, inclusion and global engagement, making NADA a pivotal institution in Bangladesh's journey toward sustainable, inclusive development.



Event Highlights: Ceremonies

Inaugural Ceremony

The inaugural session, led by Rector **Dr. Md. Shahidullah**, set the tone for two days of dialogue and reflection.

- **Chief Guest Mr. Iqbal Abdullah Harun**, Secretary, Planning Division, emphasized the importance of linking strategic planning with effective administrative mechanisms to ensure development initiatives yield tangible outcomes for citizens.
- **Keynote Speaker Professor Dr. Niaz Ahmed Khan**, Vice Chancellor, University of Dhaka, underscored the dual imperative of “administration for development” and “development of administration,” calling for visionary governance that integrates resilience, distributive justice and citizen-centric approaches.
- **Special Guest Mr. A N M Moinul Islam**, Additional Secretary, CPT, Ministry of Public Administration, highlighted the role of partnerships and innovation in strengthening public service delivery and sustainable infrastructure.

The session emphasized that effective development administration is not optional but foundational to Bangladesh’s aspiration for prosperity.



Closing Ceremony

The closing session reflected on the Dialogue’s key achievements and set directions for the future.

- **Chief Guest Mr. Mohammed Rezaul Maksud Jahedi**, Secretary, Local Government Division, emphasized the importance of leadership, adaptability, ethical governance and citizen-centric service delivery.
- **Mr. Muhammad Ali Armagan**, Country Coordinator, TIKA, highlighted over 200 projects in Bangladesh in health, education and humanitarian sectors and reaffirmed TIKA’s commitment to supporting NADA’s capacity-building mission.
- **Rector Dr. Md. Shahidullah** called for institutionalizing the Development Dialogue as an annual flagship program and announced plans for senior management development initiatives.
- Certificates were awarded to paper presenters and discussants. Closing remarks reaffirmed the Dialogue’s role in promoting inclusive growth, climate resilience, technological transformation and effective governance.





Event Highlights: Ceremonies

Cross-Cutting Insights

- Administrative transformation is central to accelerating inclusive development, with strong institutions, accountable governance and citizen-centric service delivery emerging as recurring priorities across all sessions.
- Evidence-based policymaking, supported by AI, big data and robust research, can significantly improve planning, monitoring and impact evaluation in the public sector.
- Gender-responsive policies, climate-conscious planning and PPP frameworks are essential for ensuring balanced, equitable and sustainable growth.
- Social protection programs play a direct role in enhancing financial resilience and household savings, especially when well-targeted and supported by cash transfers.
- Human resources optimization in the civil service—aligning postings with expertise, fostering specialization and motivating officials—can enhance public sector performance.
- Technology integration across sectors, including health, education, land management and financial administration, holds transformative potential but requires capacity building, infrastructure investment and strong data governance.
- Crisis preparedness and resilience—whether for climate-related disasters, pandemics, or economic shocks—requires continuous investment in institutional readiness and adaptive policy frameworks.

Way Forward

The Dialogue concluded with a shared commitment to institutionalizing the *Development Dialogue* as an annual flagship event at NADA, serving as a platform for thought leadership, research dissemination and policy innovation.

Key priorities for future dialogues include:

1. **Scaling up inter-ministerial and cross-sectoral collaboration** to address complex development challenges through coordinated policy action.
2. **Integrating technology and innovation**—including AI, big data and digital platforms—into administrative systems to enhance service delivery, efficiency and transparency.
3. **Strengthening gender equality and social protection frameworks**, ensuring that development benefits are equitably distributed and no group is left behind.
4. **Embedding resilience and sustainability** in national and local planning to address climate change, health crises and economic vulnerabilities.
5. **Fostering research-practice linkages** so that academic insights directly inform government policies and reforms.
6. **Building capacity for evidence-based decision-making** across ministries and agencies to ensure policies are data-driven and impact-focused.

The insights from both days will inform the design of the 2nd *Development Dialogue*, guiding NADA's continued role as a **center of excellence in development administration** and a convener of strategic conversations that translate ideas into actionable reforms.

Event Highlights: Technical Session

Day 1, Session 1: Public-Private Partnerships for Inclusive Growth

- Examined whether PPP projects catalyze inclusive growth in Bangladesh, noting progress since the 1990s but persistent challenges in project preparation, procurement and accountability.
- Discussants called for strengthening institutional capacity, embedding inclusivity in PPP frameworks and ensuring transparency in implementation.
- **Key takeaway:** PPPs remain a vital instrument for inclusive growth, but their success depends on robust governance mechanisms.

Day 1, Session 2: Gender and Climate-Induced Income Inequality

- Presented new empirical evidence showing female-headed households face disproportionately higher income gaps due to climate vulnerabilities.
- Recommendations included gender-responsive adaptation strategies, integration of women's concerns in climate planning and inclusive risk management policies.
- **Key takeaway:** Climate change adaptation must prioritize gender equality to ensure resilience and inclusivity.

Day 1, Session 3: Crisis Management and Health Sector Performance

- Highlighted coordination gaps, communication failures and weaknesses in preparedness during the COVID-19 pandemic.
- Recommendations focused on investing in risk communication, strengthening digital infrastructure and enhancing inter-agency coordination.
- **Key takeaway:** Effective crisis management depends on institutional agility and long-term investments in health governance.

Day 2, Session 1: Social Protection and Household Savings Behavior

- Found that households receiving social protection benefits were 42.3% more likely to save, with cash transfers more effective than non-cash benefits.
- Discussants recommended expanding cash-based schemes, ensuring timely disbursement and integrating financial literacy programs.
- **Key takeaway:** Well-designed cash-based social protection strengthens household economic resilience.



Day 2, Session 2: Artificial Intelligence and Big Data in Development Administration

- Identified AI's potential to double Bangladesh's GDP by 2035 if integrated strategically and ethically.
- Key uses include predictive analytics, automated service delivery and real-time project monitoring, but challenges remain in infrastructure, data privacy and skilled workforce availability.
- **Key takeaway:** AI offers transformative potential for governance, requiring strong policy, capacity building and ethical safeguards.



Day 2, Session 3: Motivation and Performance in the Civil Service

- Found higher motivation when officers' academic backgrounds align with job roles.
- Suggested creating specialist clusters, refining posting policies and shifting from a general to a specialist list for better talent utilization.
- **Key takeaway:** Matching skills to roles is essential for improving motivation, productivity and retention in the civil service.



Conference Findings

Introduction and Scene Setting

The 1st Development Dialogue, held on 31 May–1 June 2025 at the National Academy for Development Administration (NADA), was designed as a premier platform for reflection, debate and knowledge sharing on the theme:

“Accelerating Inclusive Development Through Effective Development Administration for a Prosperous Bangladesh.”

The Dialogue brought together senior civil servants, policymakers, academics and development partners to discuss how Bangladesh can strengthen its administrative capacity to meet the challenges of inclusive development in the 21st century.

The opening ceremony set the stage for two days of intense deliberation. Speeches from dignitaries underscored that development is not simply an economic process but a holistic transformation rooted in good governance, citizen-centric service delivery and resilient institutions.

Inaugural Ceremony

Date: 31 May 2025

Time: 10:00 AM – 11:45 AM

Venue: NADA Auditorium, Rupnagar, Mirpur, Dhaka

The inaugural ceremony of the 1st Development Dialogue, held on 31 May 2025 at the National Academy for Development Administration (NADA), marked the formal launch of what is envisioned to become a flagship platform for research–policy engagement in Bangladesh’s development administration landscape. The event brought together eminent figures from government, academia and policy research, alongside NADA’s faculty, course participants and invited stakeholders from across the civil service and development community.

The session began with a symbolic recitation from the four holy books, representing the country’s commitment to inclusivity, unity and shared values in national development efforts. This ceremonial opening set the tone for a dialogue anchored in mutual respect, collaboration and a recognition of the diversity of perspectives required to address complex national challenges.

Welcome Address – Dr. Md. Shahidullah, Rector, NADA

Presiding over the session, Dr. Md. Shahidullah, Rector and Secretary to the Government, welcomed the participants to what he described as a “historic moment” for NADA. He noted that the idea for the Development Dialogue had emerged from a recognition that Bangladesh lacked a sustained, structured platform where research findings could be tested against administrative realities and where practitioners and scholars could jointly address the evolving demands of governance.

Dr. Md. Shahidullah outlined the purpose of the Dialogue as threefold:

1. **Structured Reflection** – to provide a space where civil servants could step back from day-to-day administrative routines and engage in critical thinking on policy and implementation.
2. **Cross-ministerial Learning** – to encourage knowledge-sharing across sectors, avoiding the silos that often limit the impact of government initiatives.
3. **Evidence-informed Decision-making** – to ensure that administrative reforms and development policies are grounded in empirical research.

He emphasized the seven thematic areas around which the Dialogue was structured, ranging from governance innovation and resilience to gender equity and future-readiness. Importantly, Dr. Md. Shahidullah stressed the need to bridge the gap between academic knowledge and practical implementation, noting that too often, high-quality research fails to translate into operational improvements within government systems.

Remarks by Special Guest – Mr. A N M Moinul Islam, Additional Secretary, CPT, Ministry of Public Administration

Special Guest Mr. A N M Moinul Islam began by congratulating NADA on initiating this dialogue and underlining the timeliness of the theme, “Accelerating Inclusive Development through Effective Development Administration for a Prosperous Bangladesh.” He highlighted the centrality of development administration in ensuring that Bangladesh not only maintains its growth trajectory but also makes that growth equitable and sustainable.

Conference Findings

Drawing on his experience in the civil service, Mr. Islam stressed the importance of inter-ministerial coordination, noting that many development bottlenecks stem from fragmented decision-making and poor information flows between agencies. He also underscored the need for knowledge sharing and strategic planning, especially in the face of complex challenges like climate change, digital transformation and the imperative for citizen-centric service delivery.

Mr. Islam urged participants to see development administration as not merely the execution of projects but as a holistic process encompassing planning, implementation, monitoring and evaluation. He argued that without strong administrative systems, even the best policy designs risk failing in execution.

Speech by Chief Guest – Mr. Iqbal Abdullah Harun, Secretary, Planning Division



As Chief Guest, Mr. Iqbal Abdullah Harun framed his remarks around the twin challenges of sustaining economic growth and building resilience. He observed that Bangladesh's achievements—rising GDP, improvements in human development indicators and expanded infrastructure—were tempered by emerging risks, notably the climate crisis, demographic shifts and fiscal pressures.

He drew particular attention to population dynamics, arguing that while a youthful population can be a demographic dividend, it also poses employment and skills-development challenges if not managed well. He stressed that women's participation in the labor force is not just a social imperative but an economic necessity, capable of significantly boosting national productivity.

Mr. Harun also highlighted private sector engagement as vital for innovation and efficiency in public service delivery, while cautioning that regulatory and policy frameworks must safeguard inclusiveness and public accountability. He urged for improved tax revenue management, noting that without a stronger domestic resource base, ambitions for inclusive development would be difficult to finance.

In closing, Mr. Harun commended NADA's role in fostering policy-research linkages and urged that the Dialogue be institutionalized as a recurring event to sustain its momentum.

Keynote Address – Professor Dr. Niaz Ahmed Khan, Vice Chancellor, University of Dhaka

The keynote address by Professor Dr. Niaz Ahmed Khan was a defining moment of the ceremony, offering both intellectual framing and practical challenges to the audience. Dr. Khan began by lauding NADA's initiative, describing the Dialogue as a “celebration of scholarship, practice and public purpose.” He emphasized that in an era of complex governance challenges, there is a pressing need to “think beyond the comfort zones of our respective professions” and to build bridges between academia and administration.



Dr. Khan presented a two-pronged definition of Development Administration:

1. **Administration of Development** – the set of processes, institutions and capabilities required to deliver planned economic and social progress.
2. **Development of Administration** – the continuous reform and strengthening of administrative systems themselves to make them more capable, transparent and responsive.



Conference Findings

He argued that Bangladesh's march towards development demands progress on both fronts. Citing historical and contemporary examples, he warned against equating development with GDP growth alone, advocating instead for a more inclusive conception that incorporates distributive justice, equity and universal access to essential public goods.

Core Arguments from Dr. Khan's Speech

- **Inclusive Development as a Normative Imperative**
Dr. Khan stated that development must transcend economic metrics and actively work to narrow inequalities—whether based on income, geography, gender, or social identity. In his words, “A growth process that leaves behind the marginalized is not development; it is exclusion by another name.”
- **Environmental and Climate Integration**
He called for environmental, social and climatic considerations to be mainstreamed into all development planning. Bangladesh, as one of the most climate-vulnerable nations, cannot afford to treat climate resilience as an afterthought.
- **Governance and Social Contract Renewal**
Dr. Khan proposed a reimagined social contract, rooted in citizen trust and mutual accountability between the state and society. This, he argued, is essential for sustaining policy legitimacy and public cooperation in reforms.
- **Bridging Research and Practice**
A recurring theme in his remarks was the translation gap—the disconnect between policy research and administrative action. He urged NADA and similar institutions to act as knowledge brokers, ensuring that evidence informs decision-making at all levels.
- **Resilience as a Mindset**
Dr. Khan stressed that resilience should not be understood only as infrastructure robustness, but as an adaptive mindset embedded in planning, resource allocation and community engagement.

Synthesis and Closing

The inaugural session's discussions converged on several shared priorities:

- Institutionalizing the Development Dialogue as an annual platform for collaborative policy learning.
- Promoting inter-ministerial collaboration to tackle cross-cutting issues.
- Embedding inclusivity, climate resilience and evidence-based policymaking at the core of development administration.
- Building bridges between academia, civil service and the private sector for co-created solutions.

The ceremony closed with a note of optimism and a clear mandate: the Dialogue was not to be a one-off event, but the beginning of an evolving process to strengthen the theory and practice of development administration in Bangladesh.

Conference Findings

Session 1: Public-Private Partnerships for Inclusive Growth

The first technical session of Day 1 addressed a critical policy question: Do public-private partnerships catalyze inclusive growth in Bangladesh? The session brought together perspectives from researchers, practitioners and private sector representatives to examine empirical evidence, governance realities and strategic priorities for making PPPs more effective as engines of equitable development.

Presentation of Findings

The lead paper, presented by Najmus Sayadat with co-author Imtiazul Hassan Majumdar, approached the question from a mixed-method research design combining five sectoral case studies with a targeted stakeholder survey. Sayadat's professional background—five years at the PPP Authority and the Ministry of Finance's PPP Unit—added practitioner depth to the analysis. The research started from the recognition that while GDP-linked benefits of PPPs are well-documented globally, empirical work in Bangladesh seldom integrates the inclusive growth lens into PPP evaluation.

Defining inclusive growth as economic expansion that is both equitable and sustainable, Sayadat linked it to the broader New Public Management and collaborative governance paradigms. He underscored that PPPs are not merely financial arrangements but instruments to extend infrastructure, improve service delivery and bridge resource and capacity gaps—functions that, if designed well, directly enhance public access and equity.

From the literature review and policy context, six key factors influencing inclusivity in the PPP service delivery were distilled:

1. **Infrastructure Coverage & Accessibility** – physical reach, timely completion and operational readiness.
2. **Contractual Relationship & Partner Satisfaction** – quality of public-private contractual cooperation, risk sharing and dispute resolution.
3. **Affordability** – cost structures, subsidies and viability gap financing that determine accessibility for low-income users.

4. **Efficiency of Service Delivery** – speed, quality and reliability of services compared to traditional public provision.
5. **Environmental Concerns** – CO₂ emissions, renewable energy use, waste management and land-use efficiency.
6. **Maintenance & Operational Continuity** – sustainability of service over the contract period.

Five PPP projects—spanning roads, ports, health, water supply and ICT—served as case studies:

- Dhaka Elevated Expressway
- Potenga Container Terminal
- Hemodialysis Project
- RAJUK Water Distribution Supply Facilities
- Info Sarkar Phase III (union-level internet access)

The study found above-average performance perceptions for most sectors, with the health, water and road projects scoring high on infrastructure coverage and affordability, especially where government subsidies reduced user fees (e.g., dialysis services priced at Tk. 400 with government paying Tk. 1,719 per session). However, ICT PPPs lagged, particularly in contractual relationships and affordability—issues attributed to weak contract management and low partner satisfaction.

Despite the absence of explicit “inclusiveness” clauses in current PPP policy frameworks, Sayadat argued that many PPPs de facto deliver inclusive benefits. Yet, systemic weaknesses—project preparation gaps, procurement delays, land acquisition disputes and limited public sector contract enforcement capacity—limit their transformative potential. The presentation concluded with five recommendations:

1. Integrate inclusivity criteria into the PPP policy framework.
2. Improve project preparation and procurement systems.
3. Build social acceptability and stakeholder participation.
4. Strengthen institutional capacity and governance.
5. Encourage innovation in partnership models.

Conference Findings



Discussant Reflections

Mr. Md. Hafizur Rahman, Administrator, FBCCI, acknowledged the paper's empirical rigor but stressed the need for stronger private sector-oriented analysis. While public sector governance reform is essential, he argued, private partners' profitability and comfort in collaborating with government agencies are equally crucial for attracting investment. Without viable commercial incentives, private actors will hesitate to participate in long-term, capital-intensive projects.

He cited successful PPP examples—such as RDM in healthcare and renewable energy ventures—alongside less successful community health initiatives that failed to scale. The RAJUK water supply PPP was flagged as problematic: although infrastructure exists, low population uptake undermines financial viability. For Rahman, inclusive growth also demands employment generation through PPPs, industrialization-supportive infrastructure and private sector participation in standards and certification bodies. Furthermore, environmental compliance—illustrated by the stalled Central Effluent Treatment Plant (CETP) in the leather sector—should be embedded in PPP design, potentially via innovative environmental PPP models.

Open Floor Discussion

During the Q&A, participants probed the risk mitigation mechanisms within PPP contracts, particularly the role of insurance in safeguarding private investment. Sayadat noted that while some risk-sharing tools exist, they remain underdeveloped and public officials need deeper understanding of project bankability and creditworthiness.

Another intervention questioned the sustainability of PPPs in under-demand contexts (e.g., RAJUK water supply) and raised the issue of aligning project selection with market realities. Participants also discussed integrating logistics and research services into PPP models, suggesting opportunities in trade facilitation and intellectual property management.

There was consensus that capacity building for public officials—both in contract management and in appreciating private sector incentives—is critical. Without competent public partners, even well-designed PPPs falter.

Synthesis

The session established that PPPs in Bangladesh have demonstrable inclusive potential, but policy, institutional and contextual adjustments are necessary to fully realize this potential. Key takeaways included:

- Embedding inclusivity into PPP frameworks is urgent—not optional.
- Public sector competency and enforcement capacity are as decisive as private sector willingness.
- Viability depends on aligning project design with both public service objectives and private sector profit models.
- Environmental sustainability and social equity must be mainstreamed, not appended.

The rich exchange underscored PPPs as a strategic but under-optimized instrument for inclusive development, warranting both policy reform and mindset change among stakeholders.



Conference Findings

Session 2: Gender and Climate-Induced Income Inequality

The second technical session of Day 1 turned the spotlight on the intersection of climate change, migration and gendered income inequality in Bangladesh—a nexus increasingly relevant for policy in a country ranked among the most climate-vulnerable in the world. The session sought to unpack how environmental displacement shapes economic opportunities differently for men and women and what policy interventions are needed to bridge the resulting gaps.

Presentation of Findings

The paper, presented by Dr. Azreen Karim, offered empirical insights grounded in household-level survey data collected from climate-affected regions, including both rural and peri-urban areas receiving climate migrants. Drawing on a robust econometric framework, the study analyzed variations in income levels, employment patterns and household decision-making by gender of household head, controlling for factors such as education, asset ownership and geographic location.

The findings were striking: in climate-vulnerable areas, female-headed households experienced income gaps of up to 23% compared to male-headed households, even after controlling for other socioeconomic variables. This disparity was linked not only to direct climate shocks—such as salinity intrusion, riverbank erosion and cyclonic events—but also to structural inequalities in labor markets, access to finance and social networks.

The study highlighted three key mechanisms through which climate-induced migration exacerbates gender income inequality:

1. **Occupational Segmentation:** Displaced men were more likely to find work in construction, transport and small-scale trade in urban areas—sectors with higher earning potential—while women were often confined to low-paying, informal service work or home-based activities.
2. **Reduced Asset Ownership and Credit Access:** Women heads of households reported significantly lower rates of land or productive asset ownership, which in turn limited their eligibility for formal credit or business investment opportunities.

3. **Care Burden and Mobility Constraints:** Increased unpaid care work following displacement reduced women's ability to participate in paid labor and restrictive social norms further limited their access to jobs outside the home.

Dr. Karim noted that existing climate adaptation policies seldom address these gender-specific realities. While relocation programs and livelihood grants exist, they often adopt a “one-size-fits-all” approach, overlooking the differentiated needs and constraints of female-headed households. She called for the integration of gender-responsive adaptation frameworks into climate and migration policies, backed by targeted financing and monitoring.

Discussant Reflections

Mr Towfiqul Islam Khan, serving as discussant, commended the paper's empirical rigor but urged an expansion beyond economic indicators to include qualitative dimensions of empowerment. He stressed that while income disparity is an important metric, agency, participation in decision-making and access to justice are equally vital components of gender equity in climate adaptation.

He proposed several strategic interventions:

- Embedding gender budgeting in climate finance allocations, ensuring that a proportion of resources directly benefit women in vulnerable communities.
- Establishing community-based adaptation committees with mandated representation of women in leadership positions.
- Strengthening vocational and technical training programs for women in climate-affected areas, linked to emerging sectors such as renewable energy, eco-tourism and climate-resilient agriculture.
- Facilitating affordable childcare services in relocation sites to reduce care burdens and free up time for economic activities.

Mr. Khan also pointed to the importance of data disaggregation by gender in climate migration studies, arguing that without accurate gender-disaggregated data, policy design will remain insufficiently targeted.

Conference Findings

Open Floor Discussion

The Q&A session reflected a strong consensus among participants that climate policy in Bangladesh remains insufficiently gender-sensitive. One participant from the Ministry of Disaster Management and Relief noted that while women are often depicted as victims in climate narratives, their role as agents of resilience is underutilized in policy frameworks. For example, women's extensive experience in community health, food preservation and social networking could be harnessed more effectively in local adaptation strategies.



Another participant, a district-level officer from a coastal region, shared firsthand experiences of gender bias in aid distribution, where male community leaders sometimes prioritize male-headed households for relief or grant schemes, perpetuating inequality.

Several attendees raised the need to link adaptation programs with market access—ensuring that training for women translates into viable business or employment opportunities, rather than isolated skill-building. Suggestions included connecting women's producer groups to value chains, improving transport infrastructure to markets and promoting women-led cooperatives.

Synthesis

Session 2 converged on the view that gender-blind climate adaptation is both inefficient and inequitable. The empirical evidence from Dr. Karim's study underscored the structural barriers faced by women in post-displacement economies, while the discussant and audience reflections enriched the discussion with policy-oriented recommendations.

The synthesis of the session can be summarized as follows:

- Climate-induced migration deepens pre-existing gender inequalities, particularly in income and asset ownership.
- Policy must shift from “vulnerability framing” to an empowerment-oriented approach that recognizes women as active contributors to resilience.
- Gender-responsive adaptation requires institutional commitments, such as quotas in decision-making bodies, dedicated financing lines and accountability mechanisms.
- Linking skills to markets, reducing care burdens and expanding women's mobility are critical to closing the gender income gap in climate-affected communities.

By the session's end, there was a clear recognition that integrating gender equity into climate adaptation is not merely a social justice imperative but a development necessity—essential to unlocking the full potential of Bangladesh's human capital in the face of environmental change.

Conference Findings

Session 3: Crisis Management and Health Sector Performance

The final technical session of Day 1 examined one of the most defining governance challenges of the past decade: Bangladesh's institutional response to the COVID-19 pandemic. The discussion went beyond epidemiological outcomes to interrogate the crisis management architecture, coordination mechanisms and organizational resilience of the health sector.

Presentation of Findings

G. M. Sharfaraz, the paper presenter, brought a dual perspective to the topic—both as a researcher and as a practitioner with field-level and policy-level exposure during the pandemic. His study adopted a process-tracing approach, reconstructing the pandemic response timeline from the first reported cases in March 2020 through the various waves, while mapping decisions, resource flows and inter-agency interactions.

The core argument of the paper was that Bangladesh's health sector entered the pandemic with pre-existing fragilities:

- Limited intensive care unit (ICU) capacity
- Inadequate laboratory networks for large-scale testing
- Chronic shortages of trained health professionals, especially in rural areas
- Fragmented digital health information systems
- The pandemic, Sharfaraz argued, acted as a stress test, revealing both the resilience and the fault lines of the system.

His key findings included:

Fragmented Communication and Coordination: The health response was hampered by unclear lines of authority between the Directorate General of Health Services (DGHS), the Ministry of Health and Family Welfare (MoHFW) and local government institutions. Decision-making bottlenecks slowed the distribution of protective equipment and the expansion of testing.

Digital Tool Deployment Without Integration: Several digital tools for case reporting, vaccination registration and public information dissemination were rolled out, but these systems were siloed, lacking interoperability and real-time data-sharing capabilities.

Local-Level Resource Gaps: While national-level procurement surged, many district hospitals struggled to operationalize oxygen plants, maintain cold-chain logistics for vaccines, or ensure consistent availability of PPE.

Adaptive Innovations: Despite constraints, the pandemic accelerated the use of telemedicine, public-private lab partnerships and targeted vaccination campaign in urban slums with administered successful vaccination campaign in urban and rural areas.

Sharfaraz concluded that institutional agility—the ability to reconfigure resources, modify protocols and adapt governance structures in real time—was the defining variable that determined local-level effectiveness.

Discussant Reflections

- Dr. Syed Sharfaraz Hamid, serving as discussant, expanded the conversation from descriptive findings to strategic reform priorities. He emphasized that crisis management is not merely a subset of health policy but a core governance competency that requires cross-sectoral integration.

He proposed three immediate priorities:

- **Investing in Risk Communication Systems:** Clear, consistent and science-based messaging is essential to maintain public trust during crises. This includes training spokespersons, establishing rumor-monitoring units and using multiple communication channels, from national media to community radio.
- **Strengthening Digital Infrastructure:** Interoperable health information systems can enable real-time resource allocation and outbreak tracking.
- **Institutionalizing Inter-Agency Coordination:** Crisis response should be governed by standing arrangements—such as joint operations centers—that can be activated instantly, rather than ad hoc committees formed after the fact.

Hamid also cautioned against focusing solely on hardware solutions (beds, oxygen plants, equipment) without corresponding investments in software elements like human resources, logistics planning and community engagement.

Conference Findings

Open Floor Discussion

The Q&A session reinforced the need for a whole-of-government approach to crisis management. A district civil surgeon described the gap between central directives and local implementation capacity, noting that many field offices lacked both the technical guidance and the flexibility to adapt protocols to local conditions.



Participants from non-health sectors pointed out that crisis governance is inherently multi-sectoral—for instance, lockdown enforcement involved law enforcement agencies, food distribution required the Ministry of Food and economic relief packages needed coordination with the Ministry of Finance. Yet, these interdependencies were not always systematically managed.

A question from an audience member raised the issue of health workforce morale during extended crises. Sharfaraz acknowledged that burnout, insufficient protective measures in the early phases and lack of psychological support significantly affected performance. The suggestion of creating a national reserve health workforce—a pool of trained volunteers and retired professionals who could be mobilized during emergencies—garnered interest.

Another participant emphasized community-level preparedness as a missing link, arguing that resilient systems require trained local responders, not just national command structures.

Synthesis

This session distilled several key lessons for strengthening Bangladesh's crisis management capabilities:

- **Coordination is king:** Fragmented authority and siloed systems undermine even the best-resourced responses.
- **Digital tools must talk to each other:** Interoperability is as important as innovation.
- **Preparedness is multi-sectoral:** Effective crisis management requires integrating health with law enforcement, local governance, finance and social welfare systems.
- **Human resources matter as much as equipment:** Skilled, motivated and protected frontline workers are central to system resilience.
- **Community engagement is not optional:** Public trust, local knowledge and grassroots networks are critical assets in managing crises.
- The session closed with a consensus that the COVID-19 experience should be leveraged as a policy window for systemic reforms—not just in health governance, but in the broader crisis management ecosystem.

Concluding Remarks for Day 1

Day 1 of the Dialogue affirmed that inclusive development cannot be achieved without adaptive, resilient and evidence-based administration. Across sessions, the integration of technology, gender equity and inter-agency cooperation emerged as recurring priorities.

Conference Findings

Session 4: Social Protection and Household Savings Behavior

The fourth technical session of the 1st Development Dialogue turned the spotlight on the intersection of social protection policies and household-level financial resilience. Chaired within the thematic framework of “Accelerating Inclusive Development Through Effective Development Administration for a Prosperous Bangladesh,” this session brought forward a rigorous empirical analysis of how social protection programs influence household savings behavior in Bangladesh—an area of both economic and social importance in building long-term resilience against shocks.

Paper Presentation and Context

The paper, titled “The Impact of Social Protection Programs on Household Savings Behavior in Bangladesh,” was co-authored and presented by Sayla Swat Siddiqui, Assistant Professor at BRAC Business School and Tanvir Bashar, development researcher. Their work drew on nationally representative data from the Bangladesh Integrated Household Survey (BIHS) for 2011, 2015 and 2018, encompassing over 6,000 households across rural and urban settings. The study was grounded in two well-established economic frameworks—the Life-Cycle Hypothesis and the Permanent Income Hypothesis—which predict that households make savings decisions based on lifetime income expectations and the need for precautionary buffers.

From the outset, the presenters underlined the policy significance of the question they were addressing. Bangladesh has been progressively expanding its social protection coverage under the National Social Security Strategy (NSSS), with programs ranging from cash allowances for vulnerable groups to in-kind support such as food transfers. Yet, limited empirical research had directly examined whether these interventions translate into improved household savings—an important indicator of economic resilience and empowerment.

Key Findings

The analysis revealed a headline result: households receiving social protection benefits were 42.3 percentage points more likely to save compared to non-beneficiaries. Importantly, cash transfer programs were found to be more effective in boosting savings than non-cash benefits, suggesting that flexibility in resources

use matters for household financial planning. The study also disaggregated impacts across household types, showing stronger effects among:

- Self-employed households, who can reinvest savings into income-generating activities.
- Rural households, possibly due to more limited access to formal financial services and greater reliance on precautionary savings.
- Households with higher pre-existing savings levels, indicating complementarity rather than substitution.

The empirical strategy addressed potential endogeneity concerns through fixed-effects modeling, controlling for household-specific characteristics that could bias the estimates. The findings were statistically robust and consistent across survey years.



Discussant Reflections

The discussant, Murshida Sharmin, Joint Secretary in the Cabinet Division, commended the methodological rigor of the study and its relevance for ongoing policy debates on poverty reduction and financial inclusion. She noted that by linking social protection to savings behavior, the research bridges two critical development agendas: social safety nets and economic empowerment.

At the same time, she offered constructive suggestions for strengthening the paper:

- **Refining program categorization:** Rather than grouping all social protection schemes together, the analysis could distinguish between programs with explicit savings or asset-building components and those intended primarily for consumption smoothing.

Conference Findings

- **Updating the literature review:** Incorporating the latest scholarly sources would reflect the evolving policy discourse and empirical evidence on social protection design.
- **Incorporating primary data:** Supplementing BIHS data with targeted household interviews could yield richer insights into behavioral motivations for saving and constraints faced by different demographic groups.
- **Exploring mobile financial inclusion:** Given the rapid expansion of mobile money platforms in Bangladesh, understanding their role in mediating the relationship between social protection and savings could add an important dimension.

She also encouraged the authors to situate their findings more explicitly within the NSSS policy framework and to highlight opportunities for program design adjustments that could amplify savings outcomes.

Open Floor Discussion

The audience engagement was particularly lively, reflecting the practical implications of the research for policymakers, development practitioners and academics alike.

- **Questions on macroeconomic context:** One participant, Gustaf Rahman, asked whether the current inflationary environment might alter household savings behavior, potentially diluting the positive impacts of social protection. The presenters acknowledged that macroeconomic shocks could affect savings patterns but emphasized that the multi-year BIHS data already incorporated periods of varying economic conditions.
- **Debates on savings rationality:** Another participant questioned whether encouraging savings among the poorest households—whose immediate consumption needs remain unmet—was always rational. This sparked a brief exchange on the balance between meeting short-term necessities and fostering long-term financial security.
- **Targeting and program design:** Participants from the policy community inquired about how better targeting of programs could influence savings rates and whether differentiated program designs for urban vs. rural contexts might yield better results.

The presenters responded by stressing that while social protection is primarily about protecting the vulnerable, well-designed schemes can have productive spillovers, such as fostering savings, if beneficiaries are provided with flexible support and financial literacy tools.

Policy Implications

Several policy takeaways emerged from the discussion:

1. **Flexibility in Benefits:** Cash transfers, by allowing households to allocate resources according to their priorities, appear more conducive to savings than rigid in-kind benefits.
2. **Financial Literacy and Inclusion:** Coupling social protection with financial education and improved access to savings instruments could enhance the transformative potential of these programs.
3. **Differentiated Approaches:** Tailoring program design to the specific needs of rural vs. urban households and self-employed vs. wage-earning households, could maximize impact.
4. **Integration with Mobile Money:** Leveraging mobile financial services could make saving more accessible, secure and habitual for beneficiaries.

Synthesis

The session demonstrated how empirical research can generate actionable insights for policy design. By quantifying the link between social protection and savings, the paper by Saila Swat Siddiqui and Tanvir Bashar provided evidence that well-structured safety nets not only cushion households against shocks but also build their capacity for future investment and resilience.

The rich discussion, anchored by Murshida Sharmin's reflections and audience contributions, underscored that social protection should not be viewed merely as a cost center in the national budget, but as a strategic investment in human and economic capital. As Bangladesh seeks to deepen its social protection coverage under the NSSS, the integration of savings-promoting features could be a pivotal step toward sustainable, inclusive development.

Conference Findings

Session 5: Artificial Intelligence and Big Data in Modern Development Administration

The fifth technical session of the 1st Development Dialogue shifted the discussion toward the frontier of technology-enabled governance. This session examined how Artificial Intelligence (AI) and Big Data analytics can transform development administration in Bangladesh, offering both efficiency gains and strategic foresight. The discussion underscored that while the potential is vast, the transition requires deliberate investment in infrastructure, human capital and ethical safeguards.

Presentation of Findings

The paper, "Harnessing Artificial Intelligence and Big Data for Development Administration in Bangladesh," was presented by Mr. Mohammad Mamun, a researcher in data-driven policy innovation. Framing the study within national and global digital governance trends, the presenter argued that AI and Big Data are no longer optional add-ons but core tools for effective, inclusive and responsive governance.

The research combined case studies, global benchmarking and national readiness assessment. It reviewed applications of AI in countries such as Singapore, Estonia and India, drawing lessons for Bangladesh in areas including:

- Predictive analytics for public health (e.g., outbreak prediction, resource allocation)
- Automated service delivery in licensing, welfare payments and land administration
- Fraud detection and compliance monitoring in procurement and tax systems
- Geospatial data analysis for disaster management and infrastructure planning

In the Bangladesh context, the paper identified emerging applications already in pilot stages – such as AI-based crop disease detection, traffic flow optimization in Dhaka and automated document verification in government services.

The key finding: If Bangladesh strategically integrates AI and Big Data into core administrative processes, GDP could potentially double by 2035, according to projections from international economic modeling

studies cited in the paper. However, this potential hinges on three readiness factors:

- **Digital Infrastructure** – broadband penetration, cloud computing capabilities and secure data centers.
- **Human Capital** – availability of skilled data scientists, AI engineers and digitally literate civil servants.
- **Governance and Ethics** – legal frameworks for data privacy, algorithmic transparency and accountability.



Discussant Reflections

The discussant, Professor A B M Showkat Ali, appreciated the forward-looking scope of the paper and stressed that AI adoption in public administration must be purpose-driven rather than technology-driven. He cautioned against "pilot project fatigue," where small, high-visibility AI initiatives fail to scale due to lack of institutionalization.

His recommendations included:

- **Prioritization of Use Cases:** Focus initial AI deployments on high-impact, measurable areas such as social protection targeting, revenue collection and health service delivery.
- **Capacity-Building:** Integrate AI and data analytics training into core civil service development programs to ensure sustainable adoption.
- **Data Governance Frameworks:** Enact robust legislation on data protection and establish independent oversight bodies to safeguard against misuse.



Conference Findings

- **Public-Private Partnerships:** Collaborate with domestic and global tech firms to bridge skill and technology gaps while ensuring public ownership of critical data.

The discussant also emphasized that AI must be inclusive by design, ensuring equitable access to its benefits and avoiding algorithmic biases that could reinforce social inequalities.

Open Floor Discussion

The Q&A session revealed both enthusiasm and caution among participants.

A senior policymaker from the Ministry of Planning raised the fiscal dimension, asking how AI investments could be justified in the budget alongside pressing development needs. The presenter responded that initial investments could be offset by efficiency gains, citing tax administration examples where AI-driven compliance increased revenue collection by double digits in other countries.

An officer from BPATC inquired about local-level readiness, noting that many upazilas lack reliable internet access. This highlighted the urban-rural digital divide as a constraint to equitable AI deployment.

Another participant raised concerns about job displacement in public service. The presenter clarified that AI should be viewed as augmenting human capacity rather than replacing it, with routine, repetitive tasks automated to free civil servants for higher-value work.

Several participants suggested cross-ministry data-sharing protocols as a prerequisite for meaningful AI use, arguing that without integrated datasets, even the most advanced AI models would underperform.

Synthesis

The session distilled several key insights:

- AI and Big Data are strategic enablers for modernizing Bangladesh's development administration, with potential to dramatically improve efficiency, targeting and foresight.
- The economic case for AI is strong but must be matched by practical implementation plans, including phased rollouts, measurable KPIs and cost-benefit analysis.

- Institutional readiness – in infrastructure, skills and governance frameworks – is the decisive factor in translating potential into results.
- Ethical, inclusive and transparent design is critical to public trust and long-term sustainability.

Session 5 underscored that the integration of AI and Big Data into Bangladesh's administrative machinery is not a question of "if" but "when and how." The conversation moved beyond technology hype to address real-world implementation challenges, offering a roadmap that blends ambition with pragmatism. By aligning digital transformation with governance reform, Bangladesh can position itself as a leader in technology-enabled development among emerging economies.

Conference Findings

Session 6: Motivation and Job Role Alignment in Bangladesh Civil Service

The final technical session of the 1st Development Dialogue turned inward, focusing on the human dimension of governance: the motivation, morale and performance of civil servants in Bangladesh. This was a fitting closure to the technical deliberations, recognizing that no amount of policy innovation or technology integration can succeed without a motivated and capable public workforce.

Presentation of Findings

The paper, "Motivation and Performance of Civil Servants in Bangladesh: Determinants, Challenges and Policy Implications," was presented by Dr. Mohammad Kamrul Hasan with extensive backgrounds in public administration and training. Drawing on survey data from 312 civil servants across ministries, divisions and field administration, the study applied both quantitative and qualitative methods to assess factors influencing motivation and its impact on performance.

The presenter framed their analysis using Herzberg's Two-Factor Theory and Self-Determination Theory, distinguishing between:

- **Hygiene factors** – salary, job security, working conditions, which prevent dissatisfaction but do not necessarily create motivation.
- **Motivators** – recognition, responsibility, meaningful work, opportunities for professional growth, which actively enhance performance.



Key findings included:

1. **Intrinsic motivators matter more than extrinsic rewards:** While pay and benefits were important, recognition of good work, autonomy in decision-making and opportunities for capacity building had stronger correlations with self-reported performance.
2. **Performance is hindered by procedural rigidity:** Respondents cited bureaucratic red tape, political interference and unclear performance evaluation systems as major demotivators.
3. **Training boosts morale and competence:** Officials who had attended specialized training, particularly international programs, reported higher motivation and job satisfaction.
4. **Generational differences in motivation:** Younger officers prioritized innovation and career progression, while senior officers valued stability and institutional prestige.

The study concluded that improving civil service performance requires an integrated strategy addressing both structural reforms (clear performance metrics, merit-based promotions) and cultural change (valuing initiative, fostering collaborative work environments).

Discussant Reflections

The discussant, Mr. Jahid Hossain Panir welcomed the study as an evidence-based exploration of an often-overlooked subject in governance discourse. He emphasized that motivation is not simply a function of material incentives but of organizational culture and leadership quality.

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His recommendations included:

- **Institutionalizing Performance-Based Incentives:** Linking promotions and training opportunities to transparent performance evaluations, thereby rewarding merit rather than seniority alone.
- **Leadership Development:** Equipping senior officials with coaching and mentoring skills to cultivate younger officers' potential.
- **Work-Life Balance Policies:** Addressing burnout and stress through flexible leave arrangements, health programs and workload management.
- **Participatory Management:** Encouraging feedback loops where junior officers' ideas are heard and acted upon, fostering a sense of ownership.

The discussant also cautioned that performance improvement initiatives must be context-sensitive, acknowledging the constraints of political realities, resource limitations and citizen expectations.

Open Floor Discussion

Participants in the Q&A shared diverse perspectives:

- A senior official noted that posting and transfer practices have a profound impact on morale, with abrupt, politically motivated transfers undermining stability and performance.
- A mid-career officer argued for greater autonomy in budget allocation at the field level, enabling innovative service delivery without waiting for central approvals.
- Several participants raised the issue of digital tools as motivators – access to reliable ICT infrastructure was linked to efficiency and job satisfaction, especially among younger officers.

One participant from the Ministry of Public Administration highlighted the need for peer learning platforms, where officers could share success stories and problem-solving approaches, reinforcing positive professional identity.

Synthesis

The session generated consensus around several points:

- Motivation in the civil service is multi-dimensional, combining intrinsic, extrinsic and systemic factors.
- Leadership and organizational culture are as important as pay and benefits in sustaining high performance.
- Career development opportunities, recognition and autonomy consistently emerge as top motivators.
- Structural reforms to recruitment, posting and evaluation systems must be complemented by initiatives that foster pride, trust and collaboration.

Session 6 underscored that civil service reform is ultimately about people, not just processes. The data presented, provided a clear call to action: invest in both the professional and personal well-being of public officials, align incentives with performance and create an environment where civil servants are empowered to innovate and excel. In doing so, Bangladesh can harness the full potential of its administrative machinery to deliver inclusive and effective governance.

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Closing Ceremony

Date: 1 June 2025

Time: 4:30 PM – 6:00 PM

Venue: NADA Auditorium, Rupnagar, Mirpur, Dhaka

The closing ceremony of the 1st Development Dialogue brought the two-day exchange of ideas to a fitting conclusion, encapsulating the momentum generated across six technical sessions, an inaugural dialogue and a series of interactive discussions. Attended by senior government officials, academics, development partners and participants of the LSM, SDPM and DA course, the session served as both a reflection on the insights generated and a forward-looking commitment to institutionalizing the Dialogue as an annual event in NADA's calendar.

The ceremony began with a recap of the Dialogue's thematic breadth – from inclusive growth strategies and gender-responsive climate adaptation to AI integration and civil service motivation – underscoring the interconnectedness of development administration challenges in contemporary Bangladesh.

Remarks by Special Guest – Muhammed Ali Armagan, Country Coordinator, Turkish Cooperation and Coordination Agency (TIKA)

Mr. Armagan opened his address by commending NADA's vision in creating a space where policy and research intersect meaningfully. He shared that TIKA has implemented over 200 projects in Bangladesh across health, education, vocational training and humanitarian aid, positioning the agency as a long-standing partner in the country's development journey.

Highlighting TIKA's approach, he stressed the value of practical, people-centered interventions that deliver tangible results at the community level. He pointed to successful collaborations in skill development and infrastructure support, drawing parallels with NADA's training mission to strengthen institutional capacity.

Mr. Armagan expressed readiness to deepen cooperation with NADA, particularly in areas like joint research, faculty exchange and targeted training programs. He framed this as part of a broader commitment to fostering South-South cooperation and mutual learning, noting that Bangladesh's own development innovations could offer lessons for other countries in the Global South.



Speech by Chief Guest – Mr. Rezaul Maksud Jahedi, Secretary, Local Government Division

As Chief Guest, Mr. Jahedi delivered a substantive reflection on the imperatives of effective development administration. He began by acknowledging the Dialogue as a timely platform to connect policy intent with implementation realities, stressing that local governance is where the success or failure of national policies is ultimately determined.

Mr. Jahedi identified leadership, adaptability and ethical governance as the three cornerstones of successful public administration. He elaborated that:

- Leadership in the public sector must balance authority with empathy, fostering trust among subordinates and citizens alike.
- Adaptability is vital in a fast-changing socio-economic context, particularly in responding to crises, embracing technological innovation and accommodating shifting citizen expectations.



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- Ethical governance is the bedrock of public trust, without which administrative reforms cannot take root.

Drawing from his experience, he called for decentralized decision-making to empower local bodies with greater autonomy and resources. He also emphasized citizen-centric service delivery, urging that public officials view themselves not just as regulators but as facilitators of development.

In his concluding remarks, Mr. Jahedi endorsed NADA's proposal to institutionalize the Development Dialogue as an annual flagship event, framing it as an essential tool for continuous learning, policy innovation and cross-sector collaboration.



Remarks by Rector – Dr. Md. Shahidullah

Rector Dr. Md. Shahidullah, presiding over the closing session, reflected on the Dialogue as a milestone in NADA's institutional journey. He observed that the event had succeeded in bringing together a diverse range of perspectives, fostering candid exchanges that went beyond ceremonial speeches to address real challenges.

He reiterated his commitment to making the Development Dialogue a recurring platform, complemented by senior management development programs and thematic research initiatives that directly feed into policymaking processes. He thanked all guests, presenters, discussants and participants, highlighting the collaborative spirit that underpinned the event's success.

Synthesis and Closing

The closing ceremony converged on several shared priorities:

- Institutionalize the Development Dialogue as an annual mechanism for policy–research–practice integration.
- Expand international partnerships, particularly with organizations like TIKA, for joint programs and capacity building.
- Strengthen local governance and decentralization to improve policy impact at the grassroots.
- Foster ethical, adaptive and citizen-oriented leadership within the civil service.

The ceremony concluded with the presentation of certificates to paper presenters and discussants, symbolizing NADA's appreciation for their scholarly and professional contributions. As attendees departed, the message was clear: the Dialogue's closing was not an end but the beginning of an ongoing process to accelerate inclusive development through effective, innovative and principled development administration.

Concluding Reflection for Day 2:

The Dialogue ended on an optimistic note, with a clear commitment to continue the Development Dialogue annually as NADA's flagship program, ensuring a structured platform for evidence-based policymaking and inclusive development strategies.

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Key Outcomes and Policy Recommendations

The deliberations of the 1st Development Dialogue, held on 31 May–1 June 2025, produced a set of cross-cutting insights and actionable recommendations. These outcomes reflect the collective wisdom of policymakers, civil servants, researchers and development partners and will guide both administrative practice and the design of future Dialogues at NADA.

1. Strengthening Development Administration

- **Outcome:** The Dialogue reaffirmed that effective development administration is the bedrock of inclusive development. The keynote highlighted the dual imperative of administration for development and development of administration.
- **Recommendations:**
 - Institutionalize capacity-building programs at all levels of the civil service.
 - Integrate strategic planning and foresight exercises into routine public administration.
 - Foster inter-ministerial coordination through formalized platforms and joint task forces.

2. Enhancing Public-Private Partnerships (PPPs)

- **Outcome:** Research showed that PPPs can drive infrastructure and service delivery but face challenges in procurement, accountability and inclusivity.
- **Recommendations:**
 - Establish stronger governance frameworks for PPP projects, with clear risk-sharing mechanisms.
 - Embed social inclusivity as a mandatory criterion in PPP design and evaluation.
 - Build institutional expertise for project preparation and impact assessment.

3. Advancing Gender-Responsive Climate Adaptation

- **Outcome:** Evidence demonstrated that climate-induced migration worsens income inequality for female-headed households, highlighting the gendered dimension of climate resilience.

- **Recommendations:**

- Mainstream gender-responsive budgeting in climate and disaster adaptation policies.
- Provide targeted support to female-headed households in climate-vulnerable regions.
- Strengthen local-level institutions to ensure women's voices in climate decision-making.

4. Leveraging Artificial Intelligence and Big Data

- **Outcome:** AI and Big Data were identified as transformative tools capable of improving governance and doubling Bangladesh's GDP by 2035 if implemented strategically.
- **Recommendations:**
 - Develop a national policy framework on AI adoption in governance.
 - Create dedicated roles for data management officers in ministries and local offices.
 - Address data privacy, cybersecurity risks and cultural resistance through awareness campaigns and capacity building.
 - Foster partnerships among government, academia and industry for research and implementation.

5. Reforming Human Resource Management in Civil Service

- **Outcome:** Motivation and job-role alignment emerged as crucial factors for civil service performance. Research showed that 53% of officials prefer roles aligned with their educational background.
- **Recommendations:**
 - Introduce posting policies that align expertise with organizational needs.
 - Create specialization clusters to gradually shift from generalist to specialist structures.
 - Institutionalize Key Performance Indicators (KPIs) for transparent career progression.
 - Invest in career planning and capacity-building initiatives.

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6. Improving Crisis Preparedness in the Health Sector

- **Outcome:** COVID-19 revealed significant gaps in coordination, risk communication and local-level preparedness.
- **Recommendations:**
 - Establish integrated crisis management frameworks across ministries and agencies.
 - Expand digital health infrastructure for real-time monitoring and decision-making.
 - Conduct periodic simulation exercises to assess readiness.
 - Build partnerships with NGOs and community organizations for local-level implementation.

7. Institutionalizing the Development Dialogue

- **Outcome:** Participants unanimously recognized the Dialogue's value as a permanent platform for evidence-based policymaking.
- **Recommendations:**
 - Institutionalize the Development Dialogue as an annual flagship program of NADA.
 - Document proceedings in structured publications to ensure institutional memory.
 - Expand participation in future dialogues to include regional and international experts.
 - Link outcomes with policy reform agendas of key ministries.

Cross-Cutting Priority: Evidence-Based Policy

Across all sessions, participants highlighted that data-driven research and rigorous policy analysis must underpin administrative reforms. The Dialogue called for integrating policy research units within ministries and leveraging institutions like NADA to provide continuous knowledge support to the Government of Bangladesh.

Presented Papers During the Conference

From Crisis to Coordination: Examining Organisational Performance of Healthcare System to Tackle Covid-19 Pandemic in Bangladesh

G.M. Sharfaraz¹

Abstract

Coordination is widely perceived as an essential function of crisis management in the public sector. However, the pre-pandemic public health policies of Bangladesh lacked a well-defined blueprint for intra and inter-organisational coordination, creating a void that the government had to fill as the pandemic unfolded. This situation served as an ultimate stress test for the country's political and administrative leadership, as well as for its societal and institutional resilience. In the past two decades, Bangladesh has confronted more than thirty epidemic outbreaks of various magnitudes, which stretch healthcare organisations to the limit, rendering standard operating procedures inapplicable and severely testing professional norms. Therefore, considering the context, this study focuses on analysing the factors influencing the crisis response mechanism of the health sector in Bangladesh during the pandemic in order to identify gaps in existing frameworks. The research has applied qualitative method to probe the research objective and questions. Data was obtained through semi-structured interviews with key informants at the strategic level of health, administration and non-government sectors. The findings indicated that trust-based informal coordination, supplemented by a hybrid approach with a shadow hierarchical mechanism, played a significant role in tackling the crisis at the periphery level, whereas the role conflict, fragmentation and duplication marred central level operation. This study has suggested a coordination framework for managing upcoming crises of this kind, providing an additional and modest contribution to the current national crisis management framework, specifically addressing the challenges encountered by the health sector in Bangladesh during the pandemic.

Keywords: Crisis management, Collaboration, Coordination, Pandemic, Capacity, Public Sector

1. Introduction

The Covid-19 crisis exposed the fragility of the healthcare systems and its uncoordinated governance structure worldwide, creating an unprecedented need for coordinated response to a common problem. Crisis management theory tells us about the effectiveness of collaborative network to respond to a

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transboundary crisis like pandemic. In such situations, governments must identify and define the crisis and then clearly communicate and coordinate their response (Wang & Weinstein-Tull, 2022). This study has argued that the existing health policies in Bangladesh largely failed to accomplish the tasks proper coordination, opening up space for the more ad hoc governance which further complicated the response mechanism. After the first detection of Covid-19 cases on March 8, 2020, a total of 0.55 million confirmed cases and 8,502 deaths had been recorded in the country till March 12, 2021 (Zafri et al., 2021, p. 2). Since then, the pandemic has exposed the fragility of healthcare system in Bangladesh. For a long time, the health sector of the country had been in shambles due to trivial budget allocations, inadequate equipment, deficient infrastructure, low-quality services and high out-of-pocket (OOP) expenditures. Along with supply-side constraints, there are demand-side barriers in this sector as well, pertaining to less responsive healthcare-seeking behaviour, sociocultural barriers and a lack of empowerment (Joarder et al., 2019; Titumir, 2021).

Against this backdrop, this study explores crisis episodes that affect specific organisations (e.g., central and local administration of the health sector) rather than entire governments. The core claim of this paper is that the structure and management of public organisations are responsible for shaping the crisis response mechanisms. If the organisation can bridge the gap between decision-making and coordination, it can better deal with the transboundary crisis (Boin, Ekengren, et al., 2014; Boin & Hart, 2003). In addition, this thesis brings together debates on whether the government should be all-powerful ‘deciders’ or ‘facilitators’ of an institutional arrangement that produces an adequate response from a public administration and organisational perspective (Boin et al., 2016). Scholars have conducted and published research identifying the immediate concerns regarding policy making for appropriate Covid-19 response (Moazzem & Shibly, 2022). However, research on comprehending organisational perspective in public health crisis management is scant in Bangladesh. This thesis also highlights how effective coordination can be achieved through strategic decision-making, employing better organisational culture, mobilising available resources and, above all, enhancing its capacities. All these questions must be answered again in the context of the newly emerged global pandemic.

2. Methods and Study Design

2.1 Selection of Organisation and Informants

The study applied a highly rigorous qualitative cross-sectional strategy, gathering data at the national, district and sub-district levels. Participants were carefully chosen based on their expertise and background as policy makers and front-line responders during the pandemic. The divisional administrative units were chosen based on the rate of confirmed cases and coordination patterns in bordering areas, to identify the factors impacting coordination associated with the intensity of infections.

2.2 Data Collection

This study conducted semi-structured interviews using a topic guide whose development was informed by the study’s conceptual framework. A thematic approach has been applied to analyse the data. NVivo 12 software has been used for coding and aid the analysis. The themes were derived from the perspectives of organisational culture, structure, networking and leadership, respectively, although it should be noted that the factors often interplay and borders between these perspectives are diffuse.

2.3 Data Analysis

The researcher prepared transcription of interview audio in the MS Word. The transcription was cross checked against the audio recordings as a quality assurance measure. The researcher then imported the transcribed data into NVivo 12 software for coding and aid the analysis. Each transcription was given a unique identifier consisting of a code, date, organisation and respondent's identifier to ensure the anonymity and facilitate informed analysis. A thematic approach has been applied to provide interpretations and practical recommendation that will be relevant to policymakers.

3. Results

This section presents the findings of the health sector coordination mechanism in tackling Covid-19 pandemic, which have direct implications for national and periphery-level health-related decision-making and service-providing organisations, as well as the interactions between government-responding organisations, donors and non-government sectors. The analysis of the data suggests that healthcare system at the local level formed mixed form of coordination, mostly depending on the trust-based network management. In contrast, at the national level, the study found fragmented, redundant mechanisms, compromised accountability and duplication in coordination efforts.

3.1 Effective Role of Lead Agency

In the field of crisis management, the establishment of a lead agency has been recognised to be an effective method for enhancing coordination (Soujaa et al., 2021). Feedback from respondents in the health service sector suggests that the “lead agency provision” within the response framework functioned well at the local level, given the current power structure of Bangladesh. The current institutional power structure of Bangladesh is directly related with administration and government (Habib & Mizan, 2016, p. 136). It facilitates local administration to take role in coordinating activities at the district level. In Bangladesh the local administration manages all local networks and engage relevant stakeholders during disaster. In the face of crisis, such as pandemic, local administration have acted effectively in collaboration with health services and other related stakeholders. The existing lead agency setup has been proved to be instrumental in building trust and gather resources from the local network. Lead agency is generally a practitioner-based system. Therefore, a debate persists regarding whether the health sector should take the lead or function as a support body during acute health crises. One district administrator said that:

“The power structure of the country supports lead agency mechanism and delegates authority to the local administration to deal with the crisis in collaboration with the relevant responding agencies. In this case, we provided support to health services in fulfilling their responsibilities and established district-level coordination committee keeping civil surgeon as member-secretaries.”

3.2 Trust-based Response Network

The study investigated the emergence and efficacy of trust-based network in allocating resources and communicating risk. This network effectively facilitated resource mobilisation and rapid exchange of information. Health professionals at the district and sub-district levels expressed their opinion that they often had to manage daily commodities through informal local network due to insufficient government funding. The voluntary engagement of business, private and political community members has proved to be effective in building a trust-based networks. Literature illustrates that in the context of

public health emergencies, trust is of utmost importance. Crisis management process requires trust and confidence which can influence people's willingness to cooperate, share information and facilitate risk communication (Correia, 2024; Siegrist et al., 2012). One of the officials claimed that:

“We informally contacted to the private hospitals and related stakeholders unofficially. They helped us with their ICU and Oxygen support without any formal official documentation. Also, we received financial support from local donors only by requesting them. I must say, an informal communication network was working at that time.”

3.3 Social Capital in Risk Communication

The study found that risk communication was more effective in rural than in urban areas. In rural areas, a vast network of vaccination programmes, the social connectivity of community- health staff and widely accessible mobile phone networks significantly contributed to spreading awareness regarding the pandemic safety protocols. Also, the partnership between the Directorate of Family Planning and local government representatives, facilitated through the Extended Programme on Immunization (EPI) and maternity health support activities in community clinics, has expanded the social network and improved access to frontline healthcare professionals at the rural level. Kapucu (2006a) asserted social capital networks established before a disaster can perform better, as they tie responding agencies together and are less constrained by cross-sectoral boundaries during a crisis. In addition, boundary expansion has proven to be more instrumental in rural areas than in urban settings.

In contrast, urban areas faced challenges because of inadequate and fragmented coordination and communication. This performance made the risk management tasks difficult for the health sector. The local government, responsible for providing primary healthcare in urban areas, lacked the logistics and resources necessary to establish a robust risk communication platform. Additionally, the study confirms that the poor coordinating and deficiency in resource distribution cause logistical complications in urban areas (Chan et al., 2004, p. 1232). For example, several digital platforms such as “Shastho Batayon-16263” and national health call centres offering 24/7 tele-services including information on Covid-19 did not perform well, particularly in urban areas. Similarly, multiple emergency hotline services established by various responding organisations confused people by providing numerous conflicting or no information. Hence, the limited access to primary health data by the Civil Surgeon (CS) deteriorated the coordinated functions with city corporations and municipalities in urban areas. Therefore, the study confirms that the greater presence of bonding social capital networks is associated with the higher level of coordination and had a significant and positive effect on the overall crisis management capacity of the health sector. The findings provide insight on informal collaboration level based on the community level contextual factors at play.

“Our strong factor is that we have a social network support system for health up to the ward level. We can send and collect information rapidly. Moreover, the village people know the health workers and easily access them whenever needed.”

4. Discussion

This study examined the coordination capacity of the health sector in Bangladesh during the pandemic crisis. The findings revealed that the Bangladesh health sector employs a formal coordination mechanism characterised by both hierarchical and network-type features. According to WHO (2017) both of these

Directorates govern their own health officials at sub-district, union and community clinic levels, which creates problems in a number of areas, including data collection and reporting, hinders monitoring and supervision and referral of patients between two types of services.

This study analysed how multi-layered coordination mechanisms split the role of cohesive coordination, weakened the performance of the health service sectors and undermined the authority of the Directorate General of Health Services (DGHS) as outlined in existing Acts. This scenario partly explains the absence of a formal organogram and an effective coordination blueprint of crisis management. Data analysis shows that four vital ad hoc national-level committees established to address pandemic had overlapping and fragmented responsibilities that were misaligned, which compromised accountability and created role conflicts.

The lack of coordination among these committees affected the local-level managers' ability to make decisions and to take apt action, ultimately resulting in non-cooperation among the responding agencies. Additionally, the cabinet division added an extra layer of coordination by appointing high-ranking officials as chief coordinators for 64 districts. These coordinators were tasked with reporting directly to the Cabinet Division, which meant they were not accountable to the Ministry of Health and Family Welfare (MoHFW).

During Covid-19, the response mechanism is influenced by the organisational culture. Issues related to internal politics and professional power dynamics became increasingly visible among responding organisations. Bowman (2004) and Mandell (2001) argued that politics and power struggle issues could be important for agencies during collaboration. However, they also have the potential to downsize collaborative actions of an organisation. The tendency to seek individual credit for collective action and superimposed authority undermines collaboration. Hankering after praise and other benefits by any individual organisation creates discontent among other responding agencies in a collaborative framework. This tendency makes horizontal relationships ineffective (Clarke & Chenoweth, 2006).

It is important to comprehend the effectiveness of underlying value system of an organisation for better coordination (Vanagas & Stankevič, 2014). Peters (1998, p. 229) argues that coordination is more likely to occur without using authority if there is common logic shared among organisations. The analysis of this study suggests that if organisations share common policy values, coordination is also likely to occur with less disruption of organisational routines. At the local level the study found that shared value can guide coordination among different networks. In contrast, conflicting value systems hampered the process of coordination during crisis. Internal organisational practices, along with professional norms and values, are essential for both internal and external coordination. It is argued that these organisational practices are akin to the core culture of an organisation, which significantly influences the achievement of its goals (Mahar et al., 2021). For example, the study found that responding agencies often uphold a culture prioritise their individual role within the collaborative network rather than embracing shared responsibilities. The challenge lies in fostering an environment where all responding agencies from various sectors perceive the shared risk and are eager to coordinate their responsibilities. These findings reinforce the idea that implementing inter-governmental relations among culturally and structurally diverse organisations encounters several challenges, including a lack of common understanding among stakeholders, low trust levels, limited authority and insufficient capacity for participation (NAPA, 2004 as cited in Kapucu et al., 2010, p. 229). Therefore, it is important

to overcome the structural and cultural differences among organisations by determining their strengths and weaknesses.

ICT networks influence the coordination capacity of the health sector. Rice (1990) argued that the success of intra and inter-organisational communication systems in emergencies is determined by their effectiveness in gathering and utilising available resources, knowledge and technology. The findings indicate that the coordination capacity of the health sector received an advantage by replacing the constraints of traditional communication systems with updated digital communication tools (Comfort, 1999; Louise K Comfort & Naim Kapucu, 2006; Quarantelli, 1997). Additionally, these tools facilitated a robust communication platform in managing multiple actors in scattered locations by providing them with a rapid access to data and information during the pandemic crisis (Rice, 1990). The findings of the study supports the argument that “organisations vary considerably in organisational form, mission and constituency in ways that affect the types of social capital available to them, which in turn can be expected to influence their capacity in emergency response operations” (Kapucu, 2006a, p. 210).

The study found that risk communication was more effective in rural than in urban areas. In rural areas, a vast network of vaccination programmes, the social connectivity of community- health staff and widely accessible mobile phone networks significantly contributed to spreading awareness regarding the pandemic safety protocols. Also, the partnership between the Directorate of Family Planning and local government representatives, facilitated through the Extended Programme on Immunization (EPI) and maternity health support activities in community clinics, has expanded the social capital network and improved access to frontline healthcare professionals at the rural level. Kapucu (2006a) asserted social capital networks established before a disaster can perform better, as they tie responding agencies together and are less constrained by cross-sectoral boundaries during a crisis.

For example, several digital platforms such as “Shastho Batayon-16263” and national health call centres offering 24/7 tele-services including information on Covid-19 did not perform well, particularly in urban areas. Hence, the limited access to primary health data by the Civil Surgeon (CS) deteriorated the coordinated functions with city corporations and municipalities in urban areas. Dynamic networks are underpinned by reciprocity and mutual trust, which allow members to share information, risks and opportunities with greater ease (Carley, 1999; Comfort, 1999; Hardin, 1982 as cited in Kapucu, 2006a). The study found that the ‘trust factor’ did not always work in favour of the health sector in terms of community response. The study observed that it takes time for the health sector to successfully establish a trust-based informal coordination network at the local levels.

Therefore, the study confirms the argument that achieving integration was challenging in turbulent situations when multiple actors need to be synchronised simultaneously (Kellogg et al., 2006). This scenario is particularly true for the extreme settings in which fast-response organisations operate (Faraj & Xiao, 2006; Schakel et al., 2016). Without having “shared social cognitive resources”, it is very difficult to adapt quickly to the crisis situation and coordinate diverged response organisations (Louise K. Comfort & Naim Kapucu, 2006; Uhr et al., 2008). Therefore, for faster response, the integration or linking together of different parts of an organisation to accomplish a collective set of tasks is important (Van de Ven et al., 1976, p. 322).

The health sector at the central level played a crucial role in coordination until the Prime Minister’s Office assumed control of the mechanism. At the local level, health sector acted primarily as a technical

advisor and support entity, working in collaboration with local administrative services to respond to the pandemic. In the existing administrative structure of Bangladesh, local administration is responsible for overseeing coordination activities during disasters. It has been reported that a lack of coordination, monitoring and strategic data management negatively impacted coordination operations at the local level. This situation allowed the Cabinet Division to circumvent the roles of health sectors, establishing a shadow command and control network utilising the existing power structure. For instance, at the district level, a committee was formed and chaired by the Deputy Commissioner. At the same time, the Civil Surgeon (District Health Administrator) acted as the member secretary of this committee, which formalised the lead agency activities while managing crisis. This approach enabled the centralised cabinet command outside the health sector to manage the crisis. In another respect, this provision encouraged lead agency arrangements at the local level, which somewhat undermined the expert role of the health sector in handling crises.

However, the study observed that the lead agency successfully managed a network of organisations and directed its policy (Soujaa et al., 2021, p. 1024), which set out the agenda, maintaining cohesion and consensus among various agencies while retaining supervisory powers over other jurisdictions (Christensen et al., 2016b). Research in this areas has shown that lead agencies can pressure non-profit organisations and other local agencies to participate in collaborative governance (Jang et al., 2016). In the case of Bangladesh, the district administration worked as an inter-organisational hierarchy using a “centralised command to manage a network of multiple organisations” (Moynihan, 2008, p. 206). Coordination management from the perspective of an ‘incident control agency’ or ‘lead agency’ has proven effective during several disasters in Bangladesh. The lead agency system provides a practitioner-based functional response to all types of crises (Boin, Busuioc, et al., 2014). However, in case of Bangladesh, it is noted that when the health sector opts for taking the role of lead agency, it outmatches the existing political-administrative system in place.

The study has conclusively show that during crisis, the coordination arrangement has been observed in Bangladesh supports the argument of ‘hybrid coordination arrangement with a shadow hierarchy’ as mentioned by Héritier and Lehmkuhl (2008). This approach coordinated its core members alongside voluntary participants from the business, political and individual levels, forming a trust-based network that contributed significantly to accumulate local resources in managing crises. This framework, however, supports the argument that coordination in a crisis captures an intermediate form between traditional hierarchy and horizontal networks, referred to as the lead agency approach (Boin & Van Eeten, 2013; Christensen & Læg Reid, 2014), which proved to be more effective than fragmented and overlapping patterns of coordination in central administration. Evidence suggests that the coordination process was shaped by several internal and external factors as well as their interactions. These findings are linked to the scholarly argument that the interplay among multiple factors may lead to a hybrid coordination arrangement for managing crises in the health sector (Boin, Busuioc, et al., 2014; Moynihan, 2008). Furthermore, it has been observed that the vertical dimension of coordination managed centrally at the national level by the Cabinet Division and Prime Minister’s Office (PMO) proved to effective to an extent to employ command over local administration. However, the rigorous control of vertical coordination at the local level was absent due to the transboundary nature of the crisis and local network arrangements for resource accumulation.

Finally, the findings underscore the critical role of effective coordination. This assertion is supported by a range of scholarly articles emphasising the successes and failures of coordination capacity in crisis management in dealing with transboundary crises (Ansell et al., 2010; Boin & Bynander, 2015; Boin et al., 2013; Kettl, 2003). A notable finding from the study is its support for the claim of Christensen et al. (2016b), which presents the significance of organisational institutional and instrumental culture in fostering coordination response mechanisms. Hence, the analysis identified the pertinent nexus between the formation of lead agency formation and the adaptation of an emerging hybrid coordination framework with shadow hierarchy.

5. Conclusion

The findings suggest that the crisis coordination has impacted the organisational capacity of the health sectors to tackle pandemic. The impact of the crisis was seen as multifaceted, focusing on the managerial aspects of resource management and organisational culture as well as livelihood issues. Each aspect is important and covers several policy dimensions, prompting the health sector to collaborate and build interconnectivity with other related stakeholders. The whole process of governance came under the influence of the crisis as it spanned its boundaries to the farthest corners of the nation. The primary and direct impact was felt by the Direct Responding Organisations (DROs), where healthcare officials opted for a locally organised trust-based network to manage the crisis. The role of transformational leadership, complemented by traditional transactional characteristics, was observed at the local level, while the National Strategic Organisations (NSOs) adhered to the hierarchy set up by forming ad hoc committees to tackle the pandemic, which often faced role overlapping, fragmentation and disorientation in managing the crisis. Therefore, it is challenging to analyse which organisations had a greater impact and which played a more significant role. However, both organisations contributed to coordination, decision-making, risk communication, personnel management and shaping the organisational culture, which also suffered a blow from the pandemic. In the process of organisational adjustment, the health sector has undergone certain changes and adopted new policies. The response was initially done solely without the help of community engagement and lack of proper IT management. The difficult and unique part of the response was the fear of getting infected and dying from the crisis the medical practitioners were dealing with.

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Do Public-Private Partnerships (PPPs) Catalyze Inclusive Growth in Bangladesh?

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Abstract

Public-Private Partnerships (PPPs) have the potential to bring macroeconomic benefits by accelerating a nation's GDP growth and serving as a key driver of inclusive growth. The Bangladesh Public-Private Partnership Act, 2015 underscores the importance of extensive infrastructure investment by incorporating private participation alongside the government across various sectors. The Act also aims to meet the basic needs of the people of Bangladesh, expedite socio-economic development and enhance living standards. Under the current regulatory framework for PPPs, out of the 78 projects in the pipeline, twelve are either fully operational, partially operational, or at the construction stage. For the projects that are fully or partially operational, it is crucial to understand whether they embody the key premises of being drivers of inclusive growth. Thus, this paper seeks to answer the following question: To what extent have these projects been successful in achieving inclusiveness? The term 'inclusive growth' promotes the idea that society can achieve a balance between economic freedom and wealth creation, as well as equal opportunities and well-being. This paper explores the perspective of inclusive growth in terms of equal opportunities and well-being from the standpoint of access to services. The study employs a mixed method research approach and case study as research strategies. Data and information have been collected from respondents on five operational and partially operational PPP projects in the road, port, health, water and information communication technology sectors. Findings reveal that all the projects act as inclusive growth driver but with varying degree. It is expected that the research findings will encourage policymakers and implementers to adopt and implement projects through private investment, which will act as a true catalyst for driving the inclusive growth of Bangladesh.

Keywords: Public-Private Partnership (PPP), inclusive growth, access to services, equal opportunities, case study, operationalization

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1. Introduction

Public-Private Partnerships (PPPs) have emerged as a major public policy tool for addressing infrastructure gaps and improving public service delivery. By leveraging private sector expertise, innovation and financing, PPPs also aim to enhance the efficiency, affordability and accessibility of public services, ultimately contributing to inclusive growth. In Bangladesh, the government enacted the Bangladesh Public-Private Partnership Act of 2015 and established a regulatory framework to facilitate private sector involvement in public service delivery. Based on this regulatory framework, a few projects have started operation after the completion or partial completion of infrastructure. Therefore, question remains about the outcomes of PPPs, particularly whether they serve as a catalyst for inclusive growth. This study endeavors to explore the performance of PPPs in the context of inclusive growth from the perspective of access to public service delivery. The paper is structured as follows: Section II reviews literature on inclusive growth, PPPs and access to public services and based on which a conceptual framework is developed that delineates the indicators and measures of access to public services delivered by PPPs. Section III describes case facts, the data and methods for conducting the study. Section IV presents the findings, discussion and policy recommendations and finally Section V concludes the paper.

2. Inclusive growth, PPPs and access to public service

2.1 Inclusive Growth: The Mega Construct

Inclusive growth has emerged as a central theme in development discourse, emphasizing the need to ensure that economic growth benefits all segments of society, particularly the poor and marginalized. It seeks to balance wealth creation with equitable access to opportunities, poverty reduction and environmental sustainability (Agarwal, 2024). Agarwal (2024) emphasizes that inclusive growth seeks to boost national wealth and citizen well-being while reducing poverty and ensuring intergenerational equity. However, achieving this balance is challenging, especially in developing economies where government intervention is often necessary to address market failures, but government intervention is sometimes hindered by inefficiency and corruption. Agarwal (2024) draws on Ronald Coase's idea that clear property rights and minimal transaction costs can lead to efficient outcomes without government intervention, highlighting the tension between trust in government and faith in market-based solutions. This underscores the importance of tailoring strategies to local contexts and values to achieve long-term economic growth and well-being.

Inclusive growth has been defined by Jiang and Chen (2021) as economic growth that ensures opportunities are available to all, particularly the poor, to the maximum possible extent. They identify three key aspects of inclusive growth: economic growth, social equity and environmental sustainability. The four levels of economy indicated by Jiang and Chen (2021) in the context of inclusiveness of rural infrastructure are: economic growth, social equity, environmental sustainability and organizational inclusiveness. Similarly, Kessler and Slingerland (2015) redefined this concept as inclusive green growth to highlight sustainability, emphasizing the welfare of current and future generations. They argue that inclusive green growth not only focuses on economic growth to reduce poverty and accommodate a growing population, but also stresses the necessity for growth to be green and inclusive to enhance welfare. This approach also addresses market and governance failures to create synergies between growth, social inclusiveness and environmental sustainability.

In the context of well-being, inclusive growth is broadly defined as economic growth coupled with equal opportunities, ensuring that all members of society, particularly the poor, have equitable access to these opportunities (Rauniyar & Kanbur, 2010). This concept is rooted in the belief that equal access to opportunities is a fundamental human right and is essential for sustainable economic growth. Inequality, on the other hand, undermines growth by leading to inefficient resource utilization, poor institutional quality and social conflict. The Asian Development Bank (ADB) supports this view of inclusive growth and its Long-Term Strategic Framework (LTSF) focuses on creating and expanding economic opportunities, especially for impoverished populations who are often excluded due to various reasons like poor governance and market failures. It also highlights the need to improve policies and institutions to ensure fair access to resources like infrastructure, water, sanitation and credit. Additionally, the ADB stresses the significance of gender equality and women's empowerment in achieving inclusive growth (Rauniyar & Kanbur, 2010).

Ianchovichina and Lundström (2009) assert that while rapid economic growth is crucial for poverty reduction, it must be broad-based and inclusive to ensure long-term sustainability. Additionally, they identify productive employment as a critical driver of inclusive growth, as it generates income and raises productivity and wages over time. Similarly, Khan & Islam (2013) put emphasis on productive employment as a vital option for inclusive development but they further underscore that development can only be inclusive if all groups of people contribute to creating opportunities, sharing benefits and participating in decision-making (Conceicao et al., 2001, as cited in Khan & Islam, 2013). Additionally, Rauniyar & Kanbur (2010) highlight the importance of social inclusion and empowerment in promoting inclusive growth, drawing on the work of Ali and Son (2007). Social inclusion involves removing institutional and policy barriers that hinder economic growth, while empowerment ensures individuals have access to resources to actively participate in the growth process (Rauniyar & Kanbur, 2010).

In the context of inclusive growth, which entails economic growth coupled with equal opportunities, ensuring that all members of society, particularly the poor, have equitable access to these opportunities, infrastructure plays a pivotal role in fostering inclusive growth by connecting marginalized populations to markets, services and economic opportunities (Rauniyar & Kanbur, 2010). Rauniyar and Kanbur (2010) present the transformative impact of rural infrastructure, such as feeder roads, in improving access to healthcare, education and markets, thereby enhancing human capital and productivity. Investments in infrastructure not only stimulate economic activity but also create jobs, lower production costs and improve access to essential services, which are critical for poverty reduction and inclusive development. However, large-scale infrastructure projects require substantial resources and expertise, often beyond the capacity of public sectors. By leveraging private sector expertise and resources, PPPs can address infrastructure development, enabling governments to focus on other pressing social needs. This indeed explain that PPPs can be inclusive growth driver through infrastructure development.

PPPs are increasingly employed for infrastructure development, particularly in sectors like energy, water, transport, health and telecommunications. It is empirically established that by combining public oversight with private sector efficiency, PPPs can deliver high-quality infrastructure and services while ensuring affordability and accessibility for low-income populations. For instance, PPPs can incorporate pro-poor measures such as lifeline tariffs, differential pricing and subsidies to ensure that essential services reach the poor (Panggabean, 2006). Moreover, PPPs can stimulate economic activity by creating jobs and fostering innovation. However, achieving this requires individuals to have access to resources and opportunities created by PPPs.

Therefore, there is potential of PPPs in driving inclusive growth, particularly through infrastructure development and creating equitable access to public service. However, the effectiveness of PPPs in achieving this outcome remains underexplored, especially in the context of developing economies characterized with informal economy and lower purchasing power, like Bangladesh. In these countries PPPs face challenges such as weak institutional frameworks, lack of transparency and social resistance. Therefore, given the country's significant infrastructure gaps, persistent poverty and challenges, it is time to examine whether the PPPs can serve as a catalyst for inclusive growth. This leads to the research question of the study: Do Public-Private Partnerships (PPPs) catalyze inclusive growth in Bangladesh?

2. Public-Private Partnerships (PPPs) as a Catalyst for Inclusive Growth

Infrastructure development is widely recognized as a key driver of economic growth and PPPs have played a significant role in reducing the infrastructure gaps. Therefore, there must have causal relationship between PPPs and economic growth. Studies have established a positive relationship between PPP investments and GDP growth. For instance, Kim et al. (2011, as cited in Lee et al., 2018) demonstrated that increased capital expenditure from PPP investments could expand growth by 0.2% in Korea in 2008. Similarly, Shediak et al. (2008) found that a 1% increase in PPP investment could increase GDP per capita by 0.3%, with countries implementing 70 or more PPP projects experiencing a 25% GDP growth between 1990 and 2003. Beyond GDP growth, PPPs have also been linked to broader development indicators. Hanna and Leszek (2024) found that PPPs positively impact human development, particularly in areas such as health, education and living standards. Atapattu (2019) further supports this by demonstrating the positive effect of PPP infrastructure stock on economic growth in nine developing Asian countries. These above studies vividly present the potential of PPPs at broader scale in driving economic growth and enhancing human development.

PPPs have also found relevant in improving the efficiency and quality of public service delivery. Smitha and Sangita (2008) examined the impact of PPPs on urban governance in Bangalore, finding that they promoted a customer-centric approach through cost reduction, faster service delivery and improved service quality. For instance, the Bangalore Water Supply and Sewerage Board achieved efficiency gains through manpower reduction and outsourcing, while the Bangalore Municipal Corporation improved streetlight maintenance efficiency. In rural settings, PPPs have also shown promise in improving access to essential services. Citing from Bwana (2014) and Oxford (2019), Banda & Jeke (2022) highlights the role of PPPs in enhancing healthcare delivery in Africa, documents employment creation and improved access to transport, clean water and education through PPP. Citing from Rankin et al. (2016), Banda & Jeke (2022) further emphasize the positive impact of PPPs in the agricultural sector, where they have generated employment and improved farmer incomes. These above studies demonstrate the potential of PPPs to enhance access to service and citizen satisfaction and suggest that PPPs can play a vital role in fostering inclusive growth.

PPPs offer several potential channels for boosting economic growth (Lee et al., 2018). These include improving access to and quality of infrastructure, enhancing technical and institutional capacity, transparency and governance through private sector partnerships, optimizing public resource allocation by freeing up funds for other essential services (e.g., education, health) and attracting private long-term investment (e.g., pension, insurance funds) for infrastructure projects (Arezki et al., 2016, as

cited in Lee et al., 2018). Empirical evidence presented by Lee et al., (2018) supports the positive macroeconomic contribution of PPPs, particularly in social and pro-poor infrastructure, which plays a crucial role in poverty reduction by improving access to infrastructure and markets. Therefore, it is evident that access to infrastructure and service is one of the key drivers for inclusive growth.

Despite PPPs' potential in ensuring equitable access to services, PPPs face significant challenges too. Uddin (2019) found that PPPs in South Asia had a limited impact on access to essential services like electricity and sanitation, raising concerns about their effectiveness in addressing infrastructure gaps. Similarly, Datta (2009) highlights equity concerns in "soft" sectors like health, education and water and sanitation, where PPPs often exclude the poor and exacerbate existing inequalities. Besides, the inherent conflict between private sector profit motives and public sector social goals further complicates the image of PPPs. Koven and Strother (2016) note that this conflict requires careful policymaking to ensure that services for vulnerable populations are not compromised. Lee et al. (2018) caution that the benefits of PPPs are conditional on a region's ability to manage complex contracts. Without strong regulatory frameworks and transparent processes, PPPs risk inefficiencies and inequitable outcomes. These studies mainly indicate that without careful design and implementation PPPs cannot deliver their promise of inclusive growth.

Based on above literature, PPPs can serve as a powerful tool for fostering inclusive growth, provided they are designed and implemented with a focus on equity and accessibility in mind. However, the extent to which PPPs contribute to inclusive growth—particularly in terms of ensuring equitable access to public services—remains largely underexplored. Therefore, there is a need for further research to assess the role of PPPs in improving access to public services in driving inclusive growth. To address this gap, this study aims to explore how PPPs enhance access to public services and act as a catalyst for inclusive growth with the following two objectives:

1. To explore the conditions of access to public services that facilitate PPPs as a vehicle for inclusive growth strategies; and
2. To gauge the extent of contribution made by PPPs to inclusive growth objectives based on access to public services.

By achieving these objectives, the study aims to derive useful insights on access to public services, which may aid in designing and implementing PPPs to maximize their inclusiveness.

3. Access to Public Service through Public-Private Partnerships (PPPs)

Access to public services, encompassing services designed to address community needs such as education, healthcare, water and sanitation and infrastructure, is a cornerstone of inclusive growth. These services, ideally delivered equitably regardless of socioeconomic status, aim to improve the quality of life for all. Improving access involves not only increasing service availability but also enhancing affordability, fostering innovation and ensuring user-friendliness. PPPs have emerged as a prominent mechanism for improving access to these essential services, particularly in developing economies facing public sector capacity and resource constraints. However, the delivery of public services traditionally the domain of the public sector, has followed a cyclical evolution. Inefficiencies and resource limitations of the public sector have prompted the involvement of private entities through PPPs.

This cyclical nature is exemplified by historical cases like the Paris water supply system, which transitioned from public to private and back to public ownership (Cassis, De Luca, & Florio, 2015). More recently, the UK's Private Finance Initiative (PFI) in the 1990s marked a significant shift, with private companies designing, building and operating public infrastructure while the government purchased services over a fixed period (Wettenhall, 2003). This model, later rebranded as PPPs and has been adopted globally, including in Bangladesh, where the government has enacted the regulatory frameworks to facilitate private sector involvement in public service delivery. In recent time, the UK government is working to improve public services through the Public Sector Productivity Programme. This includes reforming public services and improving the way they are delivered as well as the government is working to improve the way public and private sector parties share risks in public-private partnerships with the aim of improving public service delivery through focusing on greater transparency, value for money, flexibility and collaboration.

PPPs have the potential to contribute significantly to inclusive growth by improving access to public services and creating economic opportunities for marginalized populations. Smitha and Sangita (2008) demonstrate how PPPs in Bangalore enhanced service delivery efficiency. Similarly, Steyn and Van Heerden (2011) highlight the success of a PPP in Johannesburg's water sector, which improved service delivery, asset maintenance and customer relations while simultaneously building local capacity. Panggabean (2006) notes that PPPs can improve infrastructure coverage and accessibility, create employment opportunities and enhance access to essential services. However, despite their potential, PPPs face challenges in ensuring equitable access to services and impact of PPPs on access to public services is not universally positive.

Uddin (2019) found that PPPs in South Asia had a limited impact on access to essential services like electricity and sanitation, raising concerns about their effectiveness in addressing infrastructure gaps. Similarly, Datta (2009) highlights equity concerns in "soft" sectors like health and education, where PPPs can sometimes exclude the poor and exacerbate existing inequalities. These findings underscore the critical need for pro-poor policies and effective governance to maximize the benefits of PPPs for inclusive growth. Koven and Strother (2016) also caution about potential conflicts of interest between the profit-driven private sector and the social-goal-oriented public sector. They stress the importance of ensuring that services for vulnerable populations prioritize quality, access and equity over profit maximization. Therefore, the sustainability of PPPs for public service delivery in lieu of public sector hinges on their ability to incorporate elements that enhance access to public services.

So, what are the elements PPPs which can help bridge infrastructure gaps and may play critical role for access to public services. Lee et al., (2018) in this regard underscores that success of PPPs depends on strong governance and institutional frameworks to ensure accountability and prevent abuse. Koven and Strother (2016) emphasize the need for careful design and regulation to avoid inefficiencies and inequitable outcomes. Affordability and pro-poor policies are essential for ensuring that PPPs benefit marginalized populations. Panggabean (2006) in this perspective underscores the importance of lifeline tariffs and targeted subsidies to make services affordable for the poor. Panggabean (2006) also mentioned that poorly designed subsidies can disproportionately benefit wealthier households and strain public budgets, necessitating careful targeting and regular tariff reviews. Besides, value-for-money (VfM) must be prioritized in PPP contracts to avoid privileged deals and substandard services.

Moreover, the way financial risks are structured and managed within a PPP significantly impacts the cost and viability of services. Therefore, according to Panggabean (2006) effective risk management is essential and clear contractual arrangements are crucial to ensure accountability and transparency in risk sharing. Timely delivery and environmental considerations are also critical for ensuring access to service delivery (Jamali, 2004; Panggabean, 2006). Panggabean (2006) argues that environmental considerations should be integrated into PPP design and implementation to ensure that services are not only accessible and affordable but also environmentally sound, as sustainable service delivery is implicitly linked to the long-term viability and affordability of PPP projects.

Participatory approach ensures the voices of marginalized communities are heard and their needs are considered in the design and implementation of PPP projects. Community participation and stakeholder engagement are, therefore, crucial for designing PPP projects that effectively meet the needs of the poor. According to Panggabean (2006), public consultations, stakeholder meetings and partnerships with community-based organizations (CBOs) can enhance the responsiveness of PPPs to local needs and priorities. Panggabean (2006) also highlights that competition among service providers is essential for lowering costs, improving access and increasing service reliability. Therefore, PPP policies should prioritize measures that promote competition and avoid replacing public monopolies with private monopolies. Finally, Koven and Strother (2016) emphasize that PPPs must balance private sector profit motives with public sector social goals to ensure that services for vulnerable populations are not compromised.

In sum, PPPs offer a potential avenue for improving access to public services, while also raising important questions. Realizing full potential requires careful consideration of several key factors: infrastructure development, affordability, service quality (including cost and timeliness), pro-poor policies, environmental impact, community participation and stakeholder engagement. These elements are crucial for improving access to public services and promoting inclusive growth. Based on these considerations, a conceptual framework for this study is presented in the next section.

4. Data and methods

4.1 Cases Under Study

For this study, five operational and partially operational projects were selected across various sectors, including road, port, health, water and ICT. While other operational projects exist, notably in the textile sector, these were excluded to maintain a focused analysis on public goods and services. Projects in the energy sector were also excluded due to their distinct regulatory framework. It is important to note that while the Bangladesh Public-Private Partnership Act 2015 promotes inclusive growth objectives, the projects selected for this study were not explicitly aligned with these objectives. Therefore, this study adopts an exploratory approach to understand the design structures of the projects and identify factors believed to be conducive to inclusive growth. Comparisons between the selected projects aim to assess the perceived contribution of each project toward inclusive growth. The projects selected for this study are shown in Table-1 and details are presented in Annexure A.

Table-1: PPP Projects under Study

Name of the Projects	Sector and short name	Contracting authority	Project size	Status
1. Construction of Dhaka-Elevated Expressway	Road PPP	Bangladesh Bridge Authority	US\$ 1.13 billion	Partial Operational
2. Equip, Operate and Maintain Patenga Container Terminal	Port PPP	Chattogram Port Authority	US\$ 170 million	Operational
3. Hemodialysis Centre at Chittagong Medical College Hospital (CMCH) and National Institute of Kidney Diseases and Urology (NIKDU)	Health PPP	Directorate General of Health Services	US\$ 1.6 million	Operational
4. Development of Water Distribution and Supply Facilities at Purbachal New Town, Dhaka on a Public Private Partnership Basis.	Water PPP	Rajdhani Unnayan Karttripakkha	US\$ 80 million	Partial Operational
5. Info-Sarkar Phase-3 (Component 1 and Component 2)	ICT PPP	Bangladesh Computer Council	US\$ 2.73 million	Operational

4.2 Conceptual Framework for the study

The concept of inclusive growth is multifaceted. For the purposes of this study, it is operationalized as access to public services within the context of opportunity creation. This approach was chosen in lieu of a more granular examination of employment, poverty alleviation, intergenerational equity in sustainable resource use, gender equality, decision-making, wealth creation and/or economic freedom. Therefore, the study is guided by following conceptual framework that links PPPs to inclusive growth through improved access to public services (Figure-1).

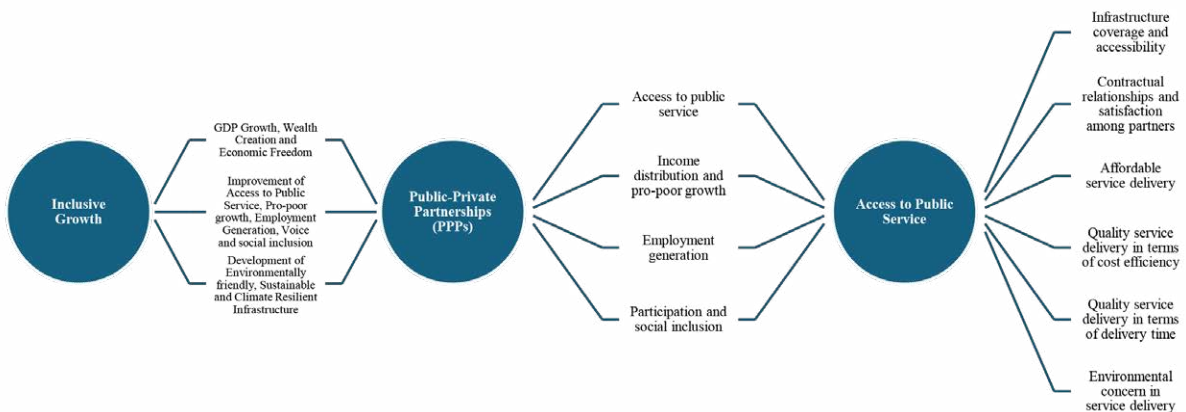


Figure-1: Conceptual Framework of the Study

Source: Authors own construction

The study examined the role played by PPPs in improving access to service delivery across different sectors (Road, Port, Health, Water, ICT) by focusing on the following key factors identified in the conceptual framework. Therefore, access to public service is explained by infrastructure coverage and accessibility, contractual relationships and satisfaction among partners, affordability of the service,

efficiency of service delivery in terms of cost of the service delivered, efficiency of service delivery in terms of timing of the service delivered and environmental concern regarding service delivery.

4.3 Operationalization of Variables for Measuring Access to Public Service through PPPs

This section outlines the operationalization of variables for measuring access to public services through PPPs, incorporating insights from the literature. The variables are categorized according to key dimensions of access, allowing for a comprehensive assessment of PPP performance. The following Table-2 presents measures against each of the six indicators which were utilized in designing questionnaire.

Table-2: Operationalization of Access to Public Service

Indicators	Measures	References
Infrastructure Coverage and Accessibility	Project Completion, Timely Commercial Operation, Linked Project Completion, Regular Maintenance and Employee Turnover	Iossa & Martimort (2015); Lee et al., (2018)
Contractual Relationships and Satisfaction among Partners	Appropriate Partnership Model, Risk Mitigation (Insurance), Contract Management Effectiveness, Win-Win Outcomes and Overall Relationship Quality	Panggabean (2006); Lee et al., (2018); Koven & Strother (2016)
Affordability of the Service	Subsidy/Viability Gap Financing, Minimum Revenue Guarantee/Profit Sharing, Tax Benefits, Non-Tax Benefits and Promotional Initiatives	ADB (2012); Panggabean (2006)
Efficiency of Service Delivery (Cost)	Access to Project Financing, Cost of Financing (WACC), Tariff Schedule Approval, Timely Financial Reporting and Profitability for Private Partner	Panggabean (2006); Koven & Strother (2016)
Efficiency of Service Delivery (Timing)	Delivery time to traditional public sector delivery and neighboring countries, Queuing/Delays, Complaint Handling and Operational Efficiency	Jamali (2004); Panggabean (2006)
Environmental Concern Regarding Service Delivery	Resource Efficiency, CO2 Emissions/ Renewable Energy/Energy Efficiency, Waste Management, Land/Water Use Efficiency and Environmental Pollution	Jamali (2004); Panggabean (2006)

These operationalized variables provide a robust and comprehensive framework for empirically assessing perceptions of the impact of PPPs on access to public services. The use of measures allows for a multifaceted evaluation of PPP performance across various dimensions of access. This approach facilitates a better understanding of how PPPs contribute to improved access to essential public services,

enabling policymakers and practitioners to make informed decisions about PPP design, implementation and evaluation. This study adopts the following hypothesis:

H1: A higher extent of infrastructure coverage and accessibility, satisfaction with contractual relationships, affordability of services, efficiency of service delivery in terms of cost and timing and environmental concerns in service delivery lead to better access to public services delivered by PPP projects, making them catalysts for inclusive growth.

4.4 Data Collection and Analysis Procedures

This study collected data and information from two primary sources: (1) documentation and archival records and (2) a questionnaire survey conducted using Google Forms. Documentation involved gathering relevant published materials, including annual reports, meeting agendas and minutes, newspaper articles, government reports, progress reports, formal studies, consultant reports and information from websites. The primary archival records for this research included project-specific documents, such as PPP contracts. A questionnaire survey was conducted using Google Forms to assess perceptions of PPPs as a driver of inclusive growth (Annexure B). The respondents included PPP implementing officials from both the public and private sectors, line ministry officials, PPP Authority officials and PPP experts. Respondents were selected purposively based on their competence in PPPs and their understanding of the specific projects under study. No service recipients were contacted. The Google Form was distributed to private partners, contracting authorities, line ministry officials and individuals who had previously worked on the projects but were now in different positions. A total of 24 responses were collected, considering resource and time constraints. Table-4 provides the composition of respondents based on the PPP projects.

Table-3: Composition of Key Respondents

Projects	Dhaka Elevated Expressway	Patenga Container Terminal	NIKDU and CMCH Dialysis Centre	Purbachal Water Supply Network	Info-Sarker Phase -3	Total
Number of Respondents	6	4	5	5	4	24

No complex analytical techniques were used for data analysis. Instead, a simple arithmetic procedure was employed to compile scores from the 5-point Likert scale used in the questionnaire. The scores were then converted into percentages to facilitate a clearer understanding of the overall perceptions of the respondents.

5. Findings and policy recommendations

5.1 Findings of the Study

Table 4 presents the survey results. It is important to reiterate that all PPPs in this study are in early stages of development. Differences in sector, contractual arrangements and geographical location make direct comparison across cases challenging. Nevertheless, the findings provide valuable insights into the broader context of PPPs and their influence on access to public services, ultimately affecting opportunity creation and the well-being of service users.

Table-4: Score obtained by each of the PPP in access to service delivery contexts

Measurement of Access to service delivery	Road PPP	Port PPP	Health PPP	Water PPP	ICT PPP
1. Infrastructure coverage and accessibility	3.9	3.1	4.4	3.6	3.5
2. Contractual relationships and satisfaction among partners	4.0	4.0	3.8	4.3	2.2
3. Affordability of the service	3.8	3.1	4.1	3.6	3.1
4. Efficiency of service delivery in terms of Cost of the service delivered	3.5	3.9	3.4	3.8	3.1
5. Efficiency of service delivery in terms of Timing of the service delivered	3.8	3.9	3.9	3.8	3.0
6. Environmental concern regarding service delivery	3.8	3.9	4.0	3.9	3.2
Average Score	3.8	3.6	3.9	3.8	3.0
Inclusiveness in percentage expression	76	72	78	76	60

The survey results reveal varying perceptions of performance across different PPP projects in the context of access to public service delivery. The data, presented as average scores on a Likert-type scale where higher scores indicate more positive perceptions, suggests a generally positive view of PPP performance by the respondents in expressing the PPPs are driver of inclusive growth, although significant variations exist across sectors and specific dimensions of access.

The Health PPP demonstrates the strongest overall perceived performance (average score of 3.9, representing 78% inclusiveness), indicating positive perceptions regarding infrastructure coverage and accessibility (4.4), affordability (4.1) and environmental concerns (4.0). This suggests that Health PPPs are perceived as effectively addressing community needs in these areas. Road PPPs also exhibit relatively strong performance (average score of 3.8, 76% inclusiveness), particularly in infrastructure coverage and accessibility (3.9) and contractual relationships (4.0). Water PPPs mirror this overall performance (average score of 3.8, 76% inclusiveness) with strong scores in contractual relationships (4.3) and environmental concerns (3.9).

Port PPPs, while generally viewed favorably (average score of 3.6, 72% inclusiveness), show lower perceived performance in infrastructure coverage and accessibility (3.1) and affordability (3.1) compared to the other sectors. The most notable variation occurs in the ICT PPP. While the average score (3.0, 60% inclusiveness) suggests a less positive overall perception, the most significant weakness lies in contractual relationships and partner satisfaction (2.2). This suggests potential challenges in the design and management of ICT PPP contracts, potentially impacting service delivery and stakeholder satisfaction. Furthermore, affordability (3.1), cost efficiency (3.1), timing efficiency (3.0) and environmental concerns (3.2) are also perceived as areas needing improvement within ICT PPPs.

This divergence in perceived performance across sectors highlights the importance of context-specific analysis in evaluating PPP effectiveness. While some sectors, like Health, Road and Port, are perceived

to be delivering positive outcomes, ICT PPP, require further investigation to understand the underlying challenges and identify potential solutions. The lower scores in certain dimensions, even within generally well-performing sectors particularly road, port and water, suggest areas where targeted interventions could further enhance the impact of PPPs on access to public services.

All projects under study represent significant milestones in the nation's investment and growth, achieved through infrastructure development and the creation of service delivery facilities. Both content analysis and survey data analysis reveal that all projects fulfill public policy objectives: health service delivery to the poor and marginalized, ICT service delivery to rural citizens (bridging the digital divide), port services to the business community (transforming logistics), water supply and sanitation services for new residents in the Purbachal area and congestion-free transportation for Dhaka city commuters. While contracts do not stipulate that projects must incorporate green and climate-resilient initiatives, the use of advanced technology and environmental awareness regarding pollution, resource utilization and waste management are evident.

Therefore, based on empirical results, it can be concluded that all projects under study demonstrate significant potential as drivers of inclusive growth. However, their role cannot yet be definitively termed robust or insignificant, as most have only recently commenced operation, either after full or partial completion of construction. Furthermore, variations in project size and sector make direct comparison challenging. Nevertheless, the study's results can inform appropriate interventions in contractual arrangements, potentially enhancing the inclusivity of these and future projects.

Finally, all cases, to varying extents, experienced challenges related to the country context, such as land acquisition, economic conditions, capacity constraints, utility relocation and transparency and accountability issues. These challenges can undermine optimal service delivery. Such issues are often reflected in weak legal enforcement of contract provisions, as these problems mostly originate within the public sector. Therefore, a shared understanding of contractual provisions by both parties, along with effective enforcement, is essential to ensure better access to public service.

5.2 Policy Recommendations

Public-Private Partnerships (PPPs) have the potential to serve as a catalyst for inclusive growth, but their success in improving access to public service depends on several factors. Based on the literature and empirical findings, the following policy recommendations are devised to enhance the effectiveness of PPPs in driving inclusive growth:

Framing Pro-Poor PPP Policies

PPP regulatory frameworks must explicitly prioritize universal service access as a key performance goal. Without such objectives, there is a risk that PPPs will focus on serving wealthier populations, leaving the poor underserved. Pro-poor measures, such as lifeline tariffs, differential pricing and subsidies, should be carefully designed to ensure affordability without compromising project viability. Governments should also consider providing public grants to extend the social benefits of PPPs, particularly in underserved areas.

Improving Project Preparation and Procurement

A thorough value-for-money (VfM) analysis should be conducted before initiating any PPP project and continuous monitoring of VfM throughout the project lifecycle need to be done. Standardized

frameworks for VfM assessment and performance evaluation should be developed and adopted by implementing agencies to ensure consistency and accountability. Additionally, PPP structuring and procurement processes must emphasize proper risk allocation and competitive service delivery to ensure affordability and accessibility for the poor.

Increasing Social Acceptability and Competency Building

PPPs often face resistance due to a lack of trust between public and private sectors and limited public awareness of their benefits. To address this, governments should invest in social awareness campaigns to highlight the advantages of PPPs in improving access to public services. Simultaneously, capacity-building initiatives, such as PPP toolkits, model documents and standardized training modules, should be developed to enhance the competencies of public officials. Training programs should be institutionalized across training organizations to ensure that officials are equipped to manage PPP projects effectively.

Encouraging Participation and Innovation

Involving the poor and local communities in PPP project design and implementation can enhance responsiveness to their needs. Public consultations, stakeholder meetings and partnerships with NGOs or community-based organizations (CBOs) can ensure that projects align with local priorities. Community-based PPP initiatives, particularly in underserved regions, can serve as a bridge between large-scale projects and localized needs, fostering innovation and inclusivity.

Strengthening Institutional Capacity and Governance

Governments must prioritize strengthening institutional capacity, legal frameworks and regulatory mechanisms to ensure transparency and accountability in PPP processes. Good governance practices, such as competitive bidding and clear contract enforcement, are essential to prevent monopolistic behavior and ensure that PPPs deliver VfM.

In summary, PPPs can be a powerful tool for inclusive growth if they are designed and implemented with a clear focus on equal opportunity creation and well-being of the citizen. By framing pro-poor policies, improving project preparation, building social acceptability, engaging local communities and strengthening institutional capacity, governments can ensure that PPPs deliver equitable and sustainable benefits to all segments of society.

6. Conclusion

Public-Private Partnerships (PPPs) hold promise as a public policy tool for improving access to public services and driving inclusive growth. This study explored the role of PPPs in enhancing access to public services as a catalyst for inclusive growth by examining five PPP projects across the transport, shipping, health, water and ICT sectors. The findings reveal that PPPs in Bangladesh demonstrate the potential to improve access to public services. By focusing on key dimensions of access and incorporating stakeholder perspectives, the research provides a comprehensive understanding of the factors that facilitate their performance in enhancing access to public services. The findings emphasize the importance of inclusiveness in project design, equitable risk-sharing, contract governance and community participation to promote equal opportunities and the well-being of citizens.

However, the study also acknowledges its limitations. The early stage of development for the projects makes it difficult to fully assess their long-term impact and sustainability. Additionally, service recipients' perceptions were not documented in this study. Furthermore, this study focused exclusively on access to public service delivery to understand its role as a driver of inclusive growth. As a result, it leaves room for future studies to explore other components of inclusive growth, such as pro-poor perspectives, employment generation, social inclusion and public participation, while incorporating service recipients as one of the key stakeholders.

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Annexure A-1

1. Construction of Dhaka Elevated Expressway Project	
Sector: Transport (Road PPP)	
Project Overview: A large-scale infrastructure project aimed at alleviating traffic congestion in Dhaka through the construction of a 23 km elevated expressway.	Key Features: <ul style="list-style-type: none"> • Improved, though partially completed, infrastructure coverage and accessibility. • Toll-based financing model with 27% Viability Gap Financing (VGF). • Significant potential for economic and social benefits. • Mostly congestion-free travel.
Implementing Agency: Bangladesh Bridge Authority	Private Party: China Shandong International Economic & Technical Cooperation Group Ltd. (CSIEC)
Project Size: USD 1.13 billion	Financing Structure: 68.5% Debt, 31.5% Equity
Contractual Model: Design, Build, Finance, Operate and Maintain (DBFOM), Mixed-Pays PPP	
Commercial Close Date: December 11, 2013 (Revised)	Commercial Operation Date (COD): Partially operational since September 3, 2023 (Airport to Farmgate & FDC gate area)
Service Recipients/Users: 44,148 (average daily traffic since partial operation commenced)	Service Delivery Time: 10 minutes travel time from Airport to Farmgate & FDC gate area
Fee/Tariff: Category 1: 80 taka; Category 2: 160 taka; Category 3: 320 taka; Category 4: 400 taka	Employees: 5000+
Environmental Initiatives: Adheres to government-applicable rules and policies.	

Annexure A-2

2. Equip, Operate and Maintain Patenga Container Terminal	
Sector: Shipping (Port PPP)	
Project Overview: Operation and maintenance of a newly constructed container terminal at Chittagong Port to increase port capacity.	Key Features: <ul style="list-style-type: none"> • Focus on enhancing port infrastructure and efficiency. • Potential to improve trade and logistics. • Financially self-sustaining project. • Improved service delivery timing.
Implementing Agency: Chittagong Port Authority	Private Party: Red Sea Gateway Terminal (RSGT) Bangladesh Ltd.
Project Size: USD 170 million	Financing Structure: 70% Debt, 30% Equity (maximum)
Contractual Model: Operate and Maintain (O&M), User-Pays PPP	
Commercial Close Date: December 6, 2023	Commercial Operation Date (COD): June 11, 2024
Service Recipients/Users: 500+	Service Delivery Time: 30 minutes
Fee/Tariff: As per Chittagong Port Authority Tariff book dated 2008	Employees: 306
Environmental Initiatives: Adheres to IFC, ADB standards.	

Annexure A-3

3. Hemodialysis Centre at CMCH and NIKDU	
Sector: Health (Health PPP)	
Project Overview: Establishment of two hemodialysis centers at Chittagong Medical College Hospital (CMCH) and the National Institute of Kidney Diseases and Urology (NIKDU) to increase access to affordable dialysis services.	Key Features: <ul style="list-style-type: none"> • Significant social impact through improved access to life-saving treatment. • Approximately 82% subsidized services. • Focus on affordability and quality of service. • Service delivery without delays.
Implementing Agency: Directorate General of Health Services (DGHS)	Private Party: Sandor Healthcare Industries Ltd.
Project Size: BDT 250 million	Financing Structure: Debt: 90 million; Equity: 160 million
Contractual Model: Supply, Install, Operate and Maintain, Mixed-Pays PPP	
Commercial Close Date: January 27, 2015	Commercial Operation Date (COD): November 26, 2016
Service Recipients/Users: 260-280/ Day	Service Delivery Time: 4 hours per session
Fee/Tariff: Starting with BDT 400 (referred) and BDT 2,190 (private), increasing annually by 5%.	Employees: 180-205
Environmental Initiatives: Adheres to Government Structure.	

4. Development of Water Distribution and Supply Facilities at Purbachal New Town	
Sector: Housing (Water PPP)	
Project Overview: Development of water distribution and supply facilities in the Purbachal New Town near Dhaka.	Key Features: <ul style="list-style-type: none"> • Integrated approach to urban water management. • Potential to improve quality of life and public health. • Partially completed infrastructure coverage and accessibility. • Service delivery without delays.
Implementing Agency: Rajdhani Unnayan Kartripakkha (RAJUK)	Private Party: Delcot Bangladesh
Project Size: USD 80 Million	Financing Structure: Information not available
Contractual Model: DBFOM, Government-Pays PPP	
Commercial Close Date: November 11, 2019	Commercial Operation Date (COD): February 02, 2023 (Partial)
Service Recipients/Users: Rajuk at present	Service Delivery Time: Information not available
Fee/Tariff: Based on pre-agreed amount	Employees: Information not available
Environmental Initiatives: Information not available	

Annexure A-5

5. Info-Sarkar Phase-3 (Component 1 and Component 2)	
Sector: ICT (ICT PPP)	
Project Overview: Improvement of internet connectivity in rural areas of Bangladesh by developing network infrastructure and backbone network.	Key Features: <ul style="list-style-type: none"> • Focus on bridging the digital divide. • Potential to enhance access to information and communication technologies. • Completed infrastructure and accessible. • Improved service delivery timing.
Implementing Agency: Bangladesh Computer Council	Private Party: <ul style="list-style-type: none"> • Advanced Digital Solutions Limited (Component 1), • SecureNet Bangladesh Limited (Component 2)
Project Size: US\$ 2.73 Million	Financing Structure: Information unknown
Contractual Model: O&M, User-Pays and Revenue sharing	
Commercial Close Date: 22 May 2023	Commercial Operation Date (COD): May 1, 2024 (Component 1), April 30, 2024 (Component 2)
Service Recipients/Users: 1400+ ISPs	Service Delivery Time: As per requirement of the clients
Fee/Tariff: As per BTRC Guidelines	Employees: 200+
Environmental Initiatives: Information not available	

Annexure B

Survey Questionnaire on Service Delivery Performance of PPP Projects

Welcome to the survey on PPP projects, particularly focusing on their service delivery performance. Your expertise in policy and project implementation will be invaluable in evaluating these projects. We highly appreciate your time and effort in participating in this survey. Please answer the following questions.

1. Name of the respondent:
2. Organization of the respondent:
3. Please identify the project on which you feel comfortable to give your valuable feedback.
 - d. Dhaka Elevated Expressway PPP
 - e. Patenga Container Terminal PPP
 - f. NIKDU and CMCH Dialysis PPP
 - g. Purbachal Water Supply PPP
 - h. Info Sarker Phase-3 PPP
9. Please assess service delivery performance based on following aspects of PPP. Here, 1- indicates disagree and 5 -indicates agree, others are in between.
 - j. Infrastructure coverage and accessibility
 - k. Partnership arrangement and satisfaction among partners
 - l. Affordability of the service delivered
 - m. Efficiency of service delivery in terms of cost
 - n. Efficiency of service delivery in terms of timing of service delivery
 - o. Environmental concern in service delivery.

a. Consideration in assessing infrastructure coverage and accessibility

Considerations	1	2	3	4	5
1. The construction of project infrastructure completed timely					
2. Commercial operation of the project started timely					
3. Linked projects connected to the project completed in time					
4. Regular and periodic maintenance of facility is done properly					
5. Employee turnover in the project company is high					

b. Consideration in assessing partnership arrangement and satisfaction among partners

Considerations	1	2	3	4	5
1. The contractual arrangement between partner is satisfactory					
2. All project facilities are covered by insurance					
3. Monitoring and supervision of the contract provision is done regularly					
4. Negotiation outcome can be termed as win-win					
5. Positive and trustworthy relationship prevails among the public and private partner					

c. Consideration in assessing affordability of service

Considerations	1	2	3	4	5
1. Government support in terms of subsidy or viability gap financing improved access to all					
2. Several other incentives prevail in the partnership arrangement					
3. Project company enjoy some tax benefits from the government					
4. Sufficient land and other utility support given to the project					
5. There are several promotional initiatives for the users of the service					

d. Consideration in assessing efficiency of service delivery in terms of cost

Considerations	1	2	3	4	5
1. Project company easily financed the project through project financing					
2. Weighted average cost of capital is low compared to other non-PPP projects					
3. There is timely approval and adjustment of the tariff schedule					
4. There is regular submission of yearly audited financial statement by the private partner					
5. The project is a profitable venture for the investors					

e. Consideration in assessing efficiency of service delivery in terms of timing

Considerations	1	2	3	4	5
1. Delivery is prompt compared to traditional public sector delivery					
2. Delivery is prompt compared to other neighboring countries					
3. There is no queuing and delay in service delivery					
4. Complaint regarding service delivery time is handled with professional manner					
5. Operational efficiency of the project is at full scale					

f. Consideration in assessing environmental concern in service delivery

Considerations	1	2	3	4	5
1. The project use resource efficiently					
2. The project reduces C02 emissions, uses of renewable energy and is energy efficient					
3. The project produces less waste or has improved waste management system					
4. The project uses land and water efficiently					
5. The project reduces environmental pollution in terms of soil, water and air pollution					

This is the end of the survey.

Thank you very much.

Author Contribution Statements

First author of the article contributed conceptualization and manuscript writing while the second author contributed to data collection and analysis.

Conflict of Interest

We declare that we do not have any financial, personal or professional conflict of interest.

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Aspiration for Job Role: A Motivational Perspective from Bangladesh Civil Service

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Abstract

This research investigates the motivational elements that affect job satisfaction and role preferences among members of the Bangladesh Administrative Service (BAS). By utilizing established motivational frameworks—namely Maslow’s Hierarchy of Needs, Herzberg’s Two-Factor Theory, Self-Determination Theory (SDT) and the Job Characteristics Model (JCM)—the study analyzes the interplay between intrinsic and extrinsic motivators and various demographic and professional factors, including tenure, educational background and personal interests, in shaping the career paths of public sector employees. Based on a survey responded by 100 BAS officials, the results reveal a significant inclination towards job assignments that correspond with their academic qualifications (53%) and personal interests (35%). Intrinsic motivators, such as autonomy, task significance and intellectual satisfaction, are identified as primary sources of motivation. A substantial portion of the participants, who are predominantly experienced and well-educated (80% holding master’s degrees and 20% possessing PhDs), emphasize the importance of roles that promote self-actualization, competence and meaningful contributions to the nation’s development. The findings underscore the essential function of job design in boosting employee motivation. By aligning job roles with employees’ educational backgrounds and career aspirations, organizations can enhance engagement and satisfaction, which is consistent with Herzberg’s focus on intrinsic motivators rather than hygiene factors. Additionally, the JCM highlights the significance of autonomy, task significance and skill variety in maintaining motivation. Public administration organizations are advised to prioritize role alignment, intellectual engagement and avenues for self-actualization within their job design frameworks. By focusing on these motivational factors, organizations can improve employee performance, foster commitment and enhance overall effectiveness, thereby cultivating a motivated and content workforce. This study enhances the comprehension of motivation in public sector management, providing practical recommendations to improve job satisfaction and organizational efficiency.

Keywords: Motivation, Public Sector, civil service, job satisfaction, public administration

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1. Introduction

To have a committed and high-performing workforce, it is crucial to emphasize the motivational factors and it is more important in the case of Public Administration. Though intrinsic and extrinsic both type of motivating factors influences the career goals, there is insufficiency of knowledge about the nature of interaction of the factors particularly with different features, such as tenure of service or expertise. This study pursues to deal with this gap by identifying the major issues that push for job satisfaction and choice for future roles. It particularly tries to explore the relationship with the factors such as alignment with personal interests, academic and professional expertise and overall motivation of public sector employees. By examining this relationship, the research aims to provide important insights that can guide the public sector agencies to improve job design which leads to enhanced employee engagement.

Considering personnel choice in organization is vital for ensuring substantial levels of motivation and performance. He recent study on 100 civil servants of the Bangladesh Administrative Service (BAS), a premier executive body involved in both policy formulation and implementation, emphasized key factors impacting their job preferences and motivational influences. This article examines the study results using recognized motivational theories, offering insights into how employee preferences are related with psychological ideas and how organizations can develop job outlines for improving motivation.

2. Aims and Objectives of the Study

The main aim of this study is to examine and assess the motivational factors that shape employee preferences in the public sector. By scrutinizing several demographic and professional features, the study seeks to identify key motivating factors that impact job satisfaction and performance. The specific objectives include: (1) examining preferences for specific roles and the reasoning behind them; (2) scrutinizing how intrinsic and extrinsic motivators affect employees' views of desirable positions; and (3) providing actionable recommendations for public sector organizations to boost employee engagement by aligning job roles with individual aspirations. This inclusive approach aims to expand the insights of motivation in the public sector, ultimately promoting more effective and satisfied human resources.

3. Theoretical Perspectives

To have a comprehensive idea about motivation in public sector management, we can rely on some major theories such as the Maslow's Hierarchy of Needs, Herzberg's Two-Factor Theory, Self-Determination Theory and the Job Characteristics Model (Oldham and Hackman, 2010). Maslow claimed that expert and knowledgeable personnel emphasize self-actualization, actively looking roles that are challenging and fall in line with their personal objectives. Herzberg's theory emphasized the significance of intrinsic motivating factors, such as meaningful work and recognition, which are more effective than extrinsic recognition such as career progression or job security in stimulating job satisfaction. Additionally, autonomy, competence and relatedness have been identified as crucial factors for improving intrinsic motivation by the Self-Determination Theory (Deci and Ryan, 1985). According to the Job Characteristics Model (Oldham and Hackman, 2010) job design can be instrumental for enhancing motivation. They emphasized "significance, autonomy and skill variety" as crucial factors in public sector management. The triangulation of the mentioned theories indicates that organizations can increase job satisfaction and overall efficiency by generating roles that encourage logical engagement,

freedom of decision-making and opportunities for effective contributions beyond organizations. This framework integrates four major theories to analyse motivation in public sector management:

Table: 1

Theory	Key Factors	Application in Public Sector
Maslow’s Hierarchy of Needs	Self-actualization	Designing roles that align with employees’ personal growth and aspirations.
Herzberg’s Two-Factor Theory	Meaningful work, recognition	Prioritizing intrinsic rewards over extrinsic incentives for job satisfaction.
Self-Determination Theory	Autonomy, competence, relatedness	Encouraging decision-making freedom, skill development and team cohesion.
Job Characteristics Model	Significance, autonomy, skill variety	Structuring jobs to enhance engagement and effectiveness.

Source: Author constructed, 2024

4. Methodology

The data in this research was collected using survey technique. The sample size was 100 and selected from members of BAS. The study adopted a purposive sampling method, particularly emphasizing officials with at least five years of service.

The BAS has been established to render their service to at both formulation and implementation levels of public policy. The initial position of this service is Assistant Secretary and the officials can assume the position of Secretary at the last stage of their career. They also have experience of working in various departments and corporations.

The study scrutinized several factors such as gender, tenure of service, educational background, preference for positions and motivational implication. It employs both open-ended and multiple-choice questions to enable both quantitative and qualitative analyses. This article utilizes theories such as “Self-Determination Theory (SDT), Herzberg’s Two-Factor Theory, Maslow’s Hierarchy of Needs and the Job Characteristics Model (JCM)” to examine and analyze the results. Moreover, recent academic knowledge has also been employed to examine the findings to offer insights into the practical implications of these results.

5. Finding and Analysis:

The findings have shown a few hematic categories. Therefore, the result has been examined and analyzed applying Thematic Analysis technique and discussed comparing main theories related to motivation.

Table: 2

Question: Tenure of Service	
Answer Choices	Responses
0-5 year	0.00%
6-10 years	8.00%
11-15 years	32.00%
16- 20 years	48.00%
More than 20 years	12.00%
TOTAL	100

Source: Author constructed, 2024

The study suggests that the participants in the survey are highly experienced as 48% of respondents have work experience between 16 to 20 years.

Table: 3

Question: Educational Qualification	
Answer Choices	Responses
PhD	20.00%
Master's	80.00%
Other (please specify)	0.00%
TOTAL	100

Source: Author constructed, 2024

The educational background indicated that the respondents are well educated, 80% of the officials have a master's degree and 20% with a PhD. The study identified major features which have significant impact on the motivation of public sector employees, with responses emphasizing tenure, educational qualifications, posting preferences and the perceived lucrateness of job postings. 53% of respondents think that placement in line with the academic background is desirable. Alongside, 35% preferred placement aligning their areas of interest. Besides, 53% claimed that postings relevant to their academic qualifications are lucrative, while 35% opt for positions related to their interests and 12% emphasized career progression scope.

Table :4

Question: What is Lucrative Posting?	
Answer Choices	Responses
Posting with ample opportunity for foreign tour	0.00%
Posting in line with your academic background	53.00%
Posting in your area of interest	35.00%
Posting in a place where your opportunity for promotion is likely to be more secured	12.00%
Posting with available logistical support	0.00%
No one above	0.00%
Other (please specify)	0.00%
Total	100

Source: Author constructed, 2024

5.1 Self-actualization and intellectual contentment

Maslow’s Hierarchy of Needs (1943) posited that once basic physiological and safety needs are met, higher-level needs like esteem and self-actualization become significant. For seasoned civil servants, self-actualization often emerges as a primary motivator, given their job security and their pursuit of recognition and meaningful contributions. In the realm of public administration, research shows that civil servants prefer roles that align with their academic qualifications, reflecting their aspirations for “competence” and “self-actualization.” This aligns with Grant’s (2008) assertion that at certain points in their careers, employees prioritize not just job security but also roles that allow them to leverage their intellectual capabilities. Recent studies further support the notion that individuals in the later stages of their careers increasingly focus on personal and professional development (Gore & Cross, 2020). The research indicated that those holding advanced degrees, such as PhDs (20%) and master’s degrees (80%), actively seek positions that enable them to apply their expertise, underscoring the importance of self-actualization and intellectual fulfillment (Wahba & Bridwell, 1976).

5.2 Preferences for Future Role: Autonomy and Task Significance

Self-Determination Theory (Deci and Ryan in 1985) emphasizes the importance of autonomy, competence and relatedness as key psychological needs that drive intrinsic motivation. Survey results support these ideas, showing that 53% of employees prefer job positions that match their academic qualifications, while 35% lean towards those that align with their personal interests, highlighting a strong preference for autonomy and competence.

The concept of “autonomy” is increasingly recognized as a crucial factor in enhancing job satisfaction among employees. Research by Gagné and Deci in 2005 underscores the tendency of employees to gravitate towards roles that empower them to make decisions regarding the application of their skills and knowledge. This notion of autonomy is not merely a preference; it is a fundamental aspect of what

makes work fulfilling and engaging. The findings of Oldham and Hackman in 2010 further reinforce this idea through their Job Characteristics Model (JCM), which articulates how autonomy serves as a key driver of employee motivation and satisfaction.

In the context of public administration, roles that grant decision-making authority and enable employees to manage significant projects are particularly effective in meeting the autonomy needs of public servants. These professionals, often equipped with advanced degrees and specialized training, are more likely to seek positions that not only allow decision-making but also provide a sense of intellectual independence. Survey data supports this trend, indicating that public servants value roles where they can exercise their judgment and expertise.

Moreover, the importance of “relatedness” emerges as another critical dimension of job satisfaction. Employees often prefer collaborative roles that allow them to engage in meaningful initiatives at the national or policy level. This preference reflects a desire to align their personal values with the overarching goals of their organization. Baard, Deci and Ryan’s research in 2004 highlights that intrinsic motivation flourishes when employees feel a connection to the broader mission of their organization. When public servants see their work as contributing to significant societal outcomes, their sense of relatedness enhances their overall job satisfaction and commitment to their roles.

In summary, the interplay between autonomy and relatedness is vital in shaping job satisfaction among public servants. By fostering environments that promote decision-making authority and collaborative engagement in meaningful projects, organizations can enhance employee motivation and fulfillment. This alignment not only benefits the individuals involved but also contributes to the effectiveness and success of public administration.

5.3 Enhancing Motivation through Job Design

Hackman and Oldham’s Job Characteristics Model (JCM) (1976) provides a detailed framework for understanding how job design affects employee motivation. Key elements like task significance, autonomy and skill variety are identified as crucial factors that boost motivation among workers. Research shows that people are especially attracted to jobs that align with their educational backgrounds or personal interests, highlighting the importance of both skill variety and task significance in driving motivation.

In public administration, especially in policy and governance roles, employees often deal with issues of national significance. This heightened task significance supports the JCM’s claim that when individuals find their work meaningful, their engagement and motivation tend to rise (Grant, 2008). Hackman and Oldham (2010) emphasize that jobs offering significant task importance, diverse skills and autonomy are more likely to foster intrinsic motivation and overall job satisfaction.

The preference for roles that align with one’s skills also ties into the idea of “task significance,” a vital aspect of the Job Characteristics Model (JCM) (Hackman & Oldham, 1976). Employees are more motivated when they feel their work makes a meaningful difference. For example, the interest expressed by individuals in areas like finance, energy policy, or governance reflects a desire for roles where their efforts can directly shape national policies, helping them appreciate the significance of their contributions (Grant & Berg, 2011).

Recent studies support these conclusions. Research shows that job characteristics, such as autonomy

and the importance of tasks, are positively linked to both job satisfaction and commitment to the organization (Humphrey, Nahrgang, & Morgeson, 2007). Jobs in public administration often involve complex problem-solving and policy development, providing significant opportunities for meaningful work, which can be a powerful motivator for employees driven by the desire to serve the public good (Oldham & Fried, 2016).

5.4 Motivators are Important as opposed to Hygiene Factors

The relationship between “motivators” and “hygiene factors,” as articulated in Herzberg’s Two-Factor Theory (Herzberg, Mausner, & Snyderman, 1959), offers profound insight into the dynamics of job satisfaction and employee engagement, particularly as reflected in recent survey results. Herzberg’s theory posits that motivator—such as achievement, recognition and the nature of the work—are critical elements that enhance job satisfaction and foster a sense of fulfillment among employees. In contrast, hygiene factors, which include salary, job security and working conditions, primarily function to prevent dissatisfaction but do not necessarily contribute to a higher level of job satisfaction.

The survey findings highlight this distinction clearly, revealing that a substantial 88% of participants expressed a preference for job postings that align with their academic interests and areas of expertise. This overwhelming inclination towards roles that resonate with their intrinsic motivators, particularly the nature of the work and the opportunity for intellectual engagement—underscores the importance of these factors in the workplace. In stark contrast, extrinsic factors such as promotion opportunities attracted the attention of only 12% of respondents, indicating that employees are more motivated by the intrinsic rewards of their work rather than external incentives.

This trend aligns with Herzberg’s assertion that intrinsic motivators are essential for achieving genuine job satisfaction (Herzberg, 1966). The emphasis on meaningful work and personal fulfillment suggests that employees are increasingly seeking roles that allow them to engage deeply in their tasks and contribute meaningfully to their fields. This perspective is further supported by recent studies conducted by Okan and Akyüz (2015), which reinforce the idea that intrinsic factors—such as opportunities for personal development and a sense of achievement—are particularly critical to job satisfaction in knowledge-intensive sectors like public administration.

Herzberg’s framework effectively elucidates why employees in these fields prioritize meaningful work over external rewards. They are driven by a desire for fulfillment that comes from engaging in positions that offer substantial intellectual challenges or opportunities for policy-making contributions. This intrinsic motivation not only enhances their job satisfaction but also fosters a deeper commitment to their roles, ultimately benefiting both the employees and the organizations they serve. As such, understanding the interplay between motivators and hygiene factors is essential for organizations aiming to cultivate a motivated and satisfied workforce, particularly in environments where intellectual engagement and personal growth are paramount.

5.5 Aligning Job Roles with Educational Backgrounds

The survey underscored the significance of educational alignment, revealing that 36% of participants expressed a preference for positions that correspond with their academic qualifications. This observation highlights the necessity of addressing the “esteem needs” identified in Maslow’s Hierarchy of Needs (Maslow, 1943). According to Maslow, esteem needs encompass the intrinsic human aspiration for

acknowledgment and respect for one's accomplishments, which is particularly relevant for individuals who have invested significant time and resources into obtaining advanced degrees. Wahba and Bridwell (1976) further characterize esteem needs as the desire for self-esteem and the esteem of others, emphasizing that individuals seek validation and recognition for their skills and achievements. This concept is especially pertinent for those with advanced degrees, as they often possess specialized knowledge and expertise that they wish to see acknowledged in their professional roles.

Moreover, this notion is closely associated with Herzberg's (1966) theory of job enrichment, which posits that positions that effectively leverage an individual's skills and knowledge contribute to enhanced job satisfaction. Herzberg's theory suggests that when employees are engaged in work that aligns with their capabilities and educational background, they are more likely to experience a sense of fulfillment and motivation. Employees possessing specialized expertise, such as those with doctoral degrees in fields like economics or engineering, are particularly inclined to experience motivation when they can meaningfully apply their knowledge in their roles. This alignment not only fosters a sense of competence but also reinforces their professional identity and self-worth.

Conversely, a disconnection between job duties and educational credentials can lead to significant dissatisfaction among employees. When individuals find themselves in positions that do not utilize their skills or align with their academic qualifications, their needs for recognition and self-actualization remain unfulfilled. This misalignment can result in feelings of frustration and disengagement, as employees may perceive their contributions as undervalued or overlooked. As Herzberg et al. (1959) noted, the absence of opportunities for achievement and recognition can diminish job satisfaction and motivation, ultimately impacting overall organizational performance. Therefore, it is crucial for organizations to recognize the importance of educational alignment and to create roles that not only match employees' qualifications but also provide avenues for growth, recognition and fulfillment of their esteem needs. By doing so, organizations can enhance employee satisfaction, retention and productivity, fostering a more engaged and motivated workforce.

5.6 Prosocial Motivation and Task Significance

Prosocial motivation, which can be defined as the aspiration to positively influence the lives of others, plays a crucial role in shaping the job preferences and career choices of individuals within the realm of public administration. This motivation is particularly salient in fields where the impact of one's work is directly felt by the community, such as in health care, finance and governance. Research conducted by Grant (2008) highlights that employees who perceive their efforts as having a significant and positive effect on others tend to exhibit higher levels of engagement and job satisfaction. This sense of engagement is not merely a byproduct of the work environment; rather, it is deeply rooted in the employees' belief that their contributions can lead to meaningful improvements in public welfare.

In the context of public administration, professionals often find their motivation intertwined with a commitment to serve the public good. For instance, those working in health care may be driven by the desire to improve patient outcomes, while individuals in governance may be motivated by the aspiration to create policies that enhance societal well-being. This intrinsic motivation is further supported by the findings of Grant and Berg (2011), which suggest that the alignment of personal values with professional responsibilities fosters a deeper sense of purpose among employees in public service roles.

The concept of “task significance,” as articulated within the Job Characteristics Model (JCM) developed by Hackman and Oldham (1976), further emphasizes the importance of prosocial motivation in the workplace. Task significance refers to the degree to which a job has a substantial impact on the lives of others and it is a critical factor in determining job satisfaction and performance. When employees recognize the broader implications of their roles—understanding that their work contributes to the well-being of individuals and communities—they are more likely to pursue excellence in their tasks. This recognition not only enhances their job performance but also reinforces their commitment to their work.

Positions within public administration that carry significant responsibility for policy execution or national planning are particularly effective in fulfilling employees’ quest for meaningful work. Such roles often require individuals to engage with complex societal issues, allowing them to see the direct consequences of their efforts. This connection between their work and its impact on the public fosters a sense of accountability and pride, which in turn enhances both intrinsic motivation and prosocial motivation.

In summary, prosocial motivation is a fundamental driver of job preferences among individuals in public administration. The desire to make a positive difference in the lives of others not only shapes their career choices but also influences their engagement and performance in their roles. By recognizing the significance of their work and its potential to effect.

6. Conclusion

The findings of the study underscore the importance of intrinsic motivators—specifically autonomy, competence and a sense of purpose—in driving employee motivation within the realm of public administration. These motivators are essential for fostering an environment where employees feel empowered and engaged in their work. Autonomy allows individuals to have control over their tasks and decision-making processes, which can lead to increased job satisfaction and a stronger commitment to their roles. Competence, on the other hand, refers to the employees’ perception of their skills and abilities, which can be enhanced through opportunities for training and development. A sense of purpose connects employees to the larger mission of the organization, making their work feel meaningful and impactful.

By applying significant motivational theories, such as Self-Determination Theory and Maslow’s Hierarchy of Needs, it becomes clear that effective job design is paramount. Jobs that are intellectually engaging and aligned with both personal and professional objectives not only maintain motivation but also enhance overall job satisfaction. When employees find their work challenging yet achievable and when they can see how their contributions align with their values and goals, they are more likely to remain motivated and committed to their roles.

Considering these insights, organizations within public administration should prioritize the creation of roles that empower employees through autonomy, encourage the utilization of diverse skills and assign meaningful responsibilities. This strategic approach to job design can lead to sustained engagement and improved performance among employees. Furthermore, by fostering an environment that values security and stability, organizations can create a foundation that supports not only the well-being of their employees but also their intellectual and professional development.

Ultimately, investing in intrinsic motivators and effective job design is not merely a means to enhance employee satisfaction; it is a strategic imperative for public administration organizations aiming

to achieve their goals and serve the public effectively. By cultivating a motivated workforce, these organizations can ensure that their employees are not only productive but also passionate about their work, leading to better outcomes for the communities they serve.

6.1 Practical Implications

The study provides with some insights which can be applied for restructuring Human Resources Management policies.

- a. Job Design Strategies: It is recommended to assign tasks that match employees' competencies and aspirations.
- b. Recognition Systems: Focus on intrinsic motivators such as professional growth and achievement can be instrumental.
- c. Autonomy & Decision-Making: It is important to empower employees with greater control over their work.
- d. Workplace Culture: Fostering collaboration and a sense of belonging is crucial to boost intrinsic motivation.

A well-designed motivational strategy in public sector management, based on the triangulation of these theories, can lead to higher job satisfaction, improved efficiency and a more engaged workforce.

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The impact of social protection programs on the household savings behavior in Bangladesh

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Abstract

This paper studies the association between social protection programs and the household savings behavior in Bangladesh. In this study, we use the data of the Bangladesh Integrated Household Survey (BIHS), conducted by the International Food Policy Research Institute (IFPRI). Using the extensive, representative survey of the rural households for the year 2011, 2015 and 2018, we estimate the effect of receipt of social protection by households on the household savings behavior. Our fixed effect model finds that the reception of social protection by the households is significantly and positively associated with likelihood of savings by the households. The coefficient of the social protection dummy in the fixed effect model is 0.0278 (significant at 5%) implying that not receiving of social protection to receiving of social protection increases the probability of savings by 2.78 percentage point in Bangladesh. This outcome is important for the policymakers as it provides insights into whether social protection programs encourage financial resilience and how program design can improve household economic behavior.

Keywords: Household savings; Social protection

JEL classification: D13, I13, I31

1. Introduction

Household savings play a crucial role in economic stability and financial resilience, enabling families to cope with income shocks, invest in human capital and improve long-term financial well-being. In developing countries like Bangladesh, where a significant portion of the population relies on informal labor markets and lacks access to formal financial services, savings behavior is particularly critical (Banerjee & Duflo, 2011). However, many low-income households struggle to accumulate savings due to income volatility, high consumption needs and limited access to financial instruments (Morduch, 1995). Social protection programs aim to alleviate such constraints by providing financial support to vulnerable populations, potentially influencing their savings decisions (Barrientos & Hulme, 2009).

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Bangladesh has implemented various social protection initiatives under its Social Security Policy Support (SSSS) Program, targeting low-income households through cash transfers, stipends, health vouchers and food security schemes (Rahman & Choudhury, 2020). These programs are designed to mitigate poverty, reduce income inequality and enhance financial security (World Bank, 2018). While social protection primarily serves as a consumption-smoothing mechanism, it may also have a broader impact on household financial behavior, including savings accumulation. Theoretically, receiving social assistance can either increase savings—by reducing liquidity constraints and allowing households to set aside funds—or decrease savings if beneficiaries perceive these transfers as a substitute for precautionary savings (Chetty & Szeidl, 2007).

This study examines the impact of social protection programs on household savings behavior in Bangladesh using data from the Bangladesh Integrated Household Survey (BIHS) for 2011, 2015 and 2018. By employing a fixed effects (FE) model and an instrumental variable (IV) approach, this paper seeks to establish whether social protection encourages households to save and, if so, to what extent. Our fixed effect model finds that the reception of social protection by the households is significantly and positively associated with likelihood of savings by the households. The coefficient of the social protection dummy in the fixed effect model is 0.0278 (significant at 5%) implying that not receiving of social protection to receiving of social protection increases the probability of savings by 2.78 percentage point in Bangladesh. In the second stage least square model, the instrumented Social Protection Dummy remains positively associated with savings. Using social protection coverage (percentage of households receiving social protection) as the instrumental variable we find that receiving social protection increases the probability of saving by 0.673 (significant at 1%). The findings provide valuable insights for policymakers regarding the role of social protection in enhancing financial resilience and promoting economic stability.

This study contributes to the literature in several ways. Firstly, it provides empirical evidence on the impact of social protection programs on household savings behavior in Bangladesh using panel data. Secondly, few studies utilize panel data and rigorous econometric techniques, such as fixed effects and instrumental variable approaches, to identify causal effects. Thirdly, existing literature has not fully explored heterogeneity in savings responses based on income levels and financial access.

The remainder of the paper is structured as follows: Section 2 presents the conceptual framework underpinning the study. Section 3 describes the data and summary statistics, while Section 4 details the empirical methodology and discusses the results. Section 5 concludes with policy implications and suggestions for future research.

2. Conceptual framework

To understand the effect of social protection programs on household savings behavior we are required to review the extant theoretical and empirical studies. This section presents relevant literature on social protection, savings behavior and their linkages.

The primary purpose of social protection programs is to reduce poverty and income inequality through cash transfers, social pensions and food subsidies. These programs can influence household savings behavior through multiple channels. Theoretically, social protection may either encourage or discourage savings. On one hand, cash transfers and social assistance relax liquidity constraints, enabling households

to save (Barrientos & Hulme, 2009). On the other hand, if households perceive social protection as a stable source of income, they may reduce precautionary savings (Chetty & Szeidl, 2007).

Empirical studies have found mixed evidence on the relationship between social protection and savings. A study on Brazil's Bolsa Família program found that cash transfers increased household savings and investment in productive assets (Glewwe & Kassouf, 2012). Tovar & Urrutia (2015) find that families that receive health benefits save more than non-recipients because recipients favorably adjust their expenditure patterns. Similarly, in Mexico, Progresa (now Prospera) beneficiaries showed higher savings and human capital investment (Gertler et al., 2009). However, other studies have shown that social protection can lead to a reduction in savings, particularly in contexts where recipients rely on transfers as a primary source of income (Kabeer et al., 2012). Gunatilake (2016) no significant relationship between the social safety net and precautionary motive savings of households in rural Sri Lanka.

Several economic theories provide insight into how households make savings decisions in response to social protection programs. The life-cycle hypothesis (LCH) model suggests that individuals plan consumption and savings over their lifetime to maintain a stable standard of living (Modigliani & Brumberg, 1954). If social protection benefits are viewed as transitory income, households may choose to save rather than spend these funds. Similarly, the Permanent Income Hypothesis (PIH) (Friedman, 1957) argues that individuals base their consumption and savings decisions on their long-term income expectations. If social protection transfers are perceived as temporary, households may choose to save a portion of the funds rather than increase immediate consumption (Deaton, 1991). Thus, households with limited access to credit and financial services may benefit more from social protection in terms of savings accumulation.

The Precautionary Savings Theory (Carroll & Kimball, 1996) posits that households save to guard against income uncertainty and future financial shocks. Social protection programs can affect precautionary savings in two ways. On one hand, they may reduce the need for precautionary savings by providing financial security, thereby discouraging saving. On the other hand, if households use these transfers to invest in income-generating activities, social protection could enhance their ability to save (Gertler et al., 2009). Empirical studies from other developing countries suggest that cash transfer programs often lead to increased savings and productive investments (Barrientos & Scott, 2008; Kabeer et al., 2012).

The Liquidity Constraints theory relates how the ease in liquidity constraint can encourage savings in Bangladesh. Many low-income households in Bangladesh face liquidity constraints that prevent them from saving (Dupas & Robinson, 2013). Social protection benefits may relax these constraints by providing disposable income that households can allocate toward savings (Banerjee et al., 2015). Additionally, behavioral factors such as mental accounting and self-control play a role in savings behavior (Thaler, 1990). Households receiving social protection might be more inclined to save if the funds are perceived as a separate income stream rather than part of their regular earnings (Ashraf et al., 2006). Thus if social protection relaxes liquidity constraints and enhances financial security, we expect a positive relationship between benefit receipt and savings.

In summary, the extant theoretical framework conjecture that social protection increases the savings behavior in a low-income country like Bangladesh.

Studies from various developing countries provide insight into how social protection influences savings behavior. For example, in Kenya, a study by Dupas and Robinson (2013) found that access to cash transfers enabled poor households to save by reducing immediate consumption pressure. In contrast, in South Africa, social pension schemes led to a decline in savings rates among older adults (Ardington et al., 2009), suggesting a substitution effect.

In Bangladesh, existing research has examined the impact of microfinance and social protection on financial inclusion. Rahman and Choudhury (2020) found that social protection programs increased financial resilience but had varied effects on savings across income groups. Households with higher financial literacy were more likely to save a portion of their transfers (Banerjee et al., 2015).

While numerous studies have explored the relationship between social protection and household savings in several other countries, limited research examines the long-term effects of social protection on savings behavior in Bangladesh.

3. Data and summary statistics

3.1 Data

The data is collected from the Bangladesh Integrated Household Survey (BIHS) for the years 2011, 2015 and 2018. The International Food Program Research Institute (IFPRI) organizes the household survey. The first round of the survey was conducted from November 2011 to March 2012. The second round was carried out from January to June 2015 and the third round from November 2018 to May 2019. All the three rounds have been used in this study. The survey contains wide-ranging data at the household member level and covers the sample households over the sample timeframe. The sample consists of 6,500 households taken from 325 Primary Sampling Units (PSUs) or 323 villages out of 68,000 villages. From the 2011/12 baseline survey to the 2015 midline survey, attrition of 4.41 percent of the sample of 5,503 households surveyed is experienced and from the 2015 midline survey to the 2018 midline survey, the number of households surveyed reduced to 4,626 for the rural nationally representative sample.

Our primary variable of interest is the savings by the household. The savings data section of BIHS data provide a detail information on various types of savings that the households do. To measure the savings, we use two procedures. Firstly, we use Savings dummy as an indicator variable equal to one if the household had savings in the corresponding year, otherwise zero. Secondly, we take the total savings amount of the household. The variable is measured in Bangladeshi Taka (BDT), using 2018 prices to correct for different inflation rates in 2011, 2015 and 2018. We then divide the total savings amount of the household by the household size. This provides us the Percapita savings.

BIHS provides information on the participation in social safety net programs by the sample households. It provides different types of programs such as stipend for secondary and higher secondary/female Student, maternal health voucher scheme and community nutrition program etc. My primary explanatory variable is the dummy variable equal to one if any of the member of the household received Social Security Policy Support (SSSS) Program, otherwise zero.

The other control variables in the study are both the characteristics of the household and the household head. Both the Household and the household head characteristics are expected to have an impact on the savings behavior of the household. Household level variables include disposable income, household

size, dependency ratio and home ownership. Higher disposable income is generally associated with increased savings, as suggested by the life-cycle hypothesis (Modigliani & Brumberg, 1954). Households with greater income have a higher propensity to save after meeting basic consumption needs (Deaton, 1991). The BIHS data provides income from different sources. By adding all types of income we find the total income of the household which is used as the disposable income.

Household size is an important variable. Our conventional idea assumes that the bigger the household size, the higher is the likelihood of savings. However, Browning & Lusardi (1996) find that larger households often have higher consumption requirements, potentially reducing their ability to save. The BIHS data provides information by household members. By adding the number of members, we find the household size.

A higher dependency ratio—measured as the proportion of non-working members to working members—can place financial strain on households, thereby reducing savings (Schultz, 1998). Households with more dependents tend to allocate more resources to consumption rather than saving. Home ownership refers to a dummy variable equal to one if the house at which the household lives in is owned by them or their family. If the house is owned by them, the expenditure on rent is saved, which can increase saving. Therefore, home ownership is expected to be positively related to the dependent variable.

Household head's education plays an important role in the savings behavior. Higher education levels are typically linked to better financial literacy and improved long-term financial planning, leading to higher savings rates (Lusardi & Mitchell, 2014). Educated household heads may be more likely to engage in precautionary savings. Employment status is a key determinant of financial stability. Households with employed heads are expected to have a steady income stream, making it easier to save (Carroll & Summers, 1991). Here, the household head emp is a dummy variable equal to one if the household head is employed, otherwise zero.

Household head age influences the saving patterns based on life-cycle theory. Younger individuals might have lower savings due to early-career income constraints, whereas middle-aged individuals tend to save more as they prepare for retirement (Ando & Modigliani, 1963).

3.2 Summary Statistics

Table 1 presents the summary statistics for the key variables used in the analysis. The dependent variable, Savings Dummy, indicates whether a household engages in saving behavior. The mean value of 0.52 suggests that 52% of the households report positive savings, while the remaining 48% do not save. The standard deviation of 0.50 reflects the binary nature of this variable.

The per capita savings amount exhibits substantial variation, with a mean of 6,113.95 BDT and a high standard deviation of 25,775.31 BDT, indicating a skewed distribution with a few households saving significantly higher amounts. The Social Protection Dummy, which identifies households receiving social protection benefits, has a mean value of 0.26, implying that 26% of the surveyed households benefit from social protection programs.

Table 1: Summary Statistics

	Mean	Stddev	p10	p25	p50	p75	p90	N
Savings dummy	0.52	0.50	0	0	1	1	1	1860
Per capita savings	6113.95	25775.31	0	0	133.33	1795.38	13333.33	1860
Social protection dummy	0.26	0.44	0	0	0	1	1	1860
Disposable income	77887.29	92605.27	840	22960	57924	97704	168480	1860
Household size	3.05	0.42	3	3	3	3	3	1860
Dependency ratio	0.00	0.02	0	0	0	0	0	1860
Home ownership	0.01	0.11	0	0	0	0	0	1860
Household head edu	4.88	1.17	5	5	5	5	5	1860
Household head emp status	0.01	0.11	0	0	0	0	0	1860
Household head age	28.88	5.25	28	28	28	28	28	1860

Among the control variables, Disposable Income shows a mean of 77,887.29 BDT, but with a substantial standard deviation of 92,605.27 BDT, highlighting the income disparity across households. The average Household Size is relatively small, with a mean of 3.05 members and the Dependency Ratio is notably low, averaging 0.00, suggesting that most households do not have dependents. Additionally, only 1% of households report home ownership and 1% of household heads are employed, which may reflect a predominance of informal sector work or unemployment. The average Household Head’s Education Level is approximately 4.88 years of schooling and the mean Household Head Age is 28.88 years, indicating a relatively young population.

4. Empirical framework and results

4.1 Empirical framework

To examine the impact of social protection programs on household savings behavior, we employ a fixed effects (FE) regression model. The primary specification is as follows:

$$\text{Savings}_{it} = \alpha + \beta_1 \text{Social protection dummy}_{it} + \beta_2 X_{it} + \mu_i + \lambda_t + \epsilon_{it} \dots \dots (1)$$

Where Savings_{it} represents the savings behavior of household i at time t . The Savings dummy $_{it}$ is measured as a binary dummy (1 = household saves, 0 = otherwise). The Per capita Saving $_{it}$ is the total saving amount divided by the number of members of the household. Social protection dummy $_{it}$ is the key independent variable, denoting whether the household receives social protection benefits. X_{it} is a vector of control variables, captures household fixed effects, λ_t captures time fixed effects and ϵ_{it} is the error term.

The fixed effects (FE) model is chosen to control for time-invariant unobserved heterogeneity across households. By incorporating household fixed effects, we account for differences in household characteristics that do not change over time, such as cultural preferences, financial habits, or regional disparities. This approach helps isolate the causal impact of social protection on savings by mitigating potential omitted variable bias.

However, there remains a concern about endogeneity due to potential reverse causality or omitted time-varying factors that influence both social protection receipt and savings behavior. To address this issue, we employ a two-stage least squares (2SLS) instrumental variable approach.

To address endogeneity concerns, we use social protection coverage as an instrument for social protection receipt. The Coverage is measured as the number of household members receiving social protection benefits divided by the total number of members of the household. The 2SLS estimation involves two stages: In the first stage we estimate the likelihood of receiving social protection benefits using social protection coverage as an instrument.

$$\text{Social protection dummy}_{it} = \alpha + \beta_1 \text{Coverage}_{it} + \beta_2 X_{it} + \mu_i + \lambda_t + \varepsilon_{it} \dots \dots (2)$$

In the second stage, we use the predicted values from the first stage to estimate the impact of social protection on savings.

$$\text{Savings}_{it} = \alpha + \beta_1 (\text{Social protection dummy}_{it}) + \beta_2 X_{it} + \mu_i + \lambda_t + \varepsilon_{it} \dots \dots (1)$$

The use of social protection coverage as an instrument is justified as it is correlated with actual receipt of social protection benefits but unlikely to directly influence household savings, other than through its impact on benefit receipt. The results from the 2SLS model allow us to obtain an unbiased estimate of the causal effect of social protection programs on savings. The relevance of social protection coverage is measured by the F-statistics of the first stage regression which is more than 10 in our estimation, implying it as a relevant IV and not a weak IV. We also confirm the exogeneity of the coverage by Hansen’s J test, which also refers that our instrument is valid.

4.2 Empirical results

4.2.1 Baseline Regression Results

Table 2 presents the results from the fixed effects (FE) and Probit models examining the impact of social protection programs on household savings behavior.

Column 1 of the Table 2 shows the Fixed Effects Model, where Savings Dummy is the dependent variable. The Social Protection Dummy is positively associated with savings, with a coefficient of 0.0278 ($p < 0.05$), indicating that households receiving social protection benefits are 2.78 percentage points more likely to save compared to those that do not. This finding supports the hypothesis that social protection enhances the household’s ability to accumulate savings, potentially by providing financial stability and liquidity relaxation.

Among the control variables, Disposable Income has a positive and significant effect on savings (coefficient = $3.74e-07$, $p < 0.01$), suggesting that as household income increases, the probability of saving also rises. Household Size is marginally significant (coefficient = 0.00984, $p < 0.1$), indicating that larger households may have a slightly higher tendency to save. The Dependency Ratio has a strong negative effect (coefficient = -4.337, $p < 0.05$), implying that households with dependents are less likely to save, potentially due to higher consumption needs. Home Ownership also has a significant negative effect on savings (coefficient = -0.121, $p < 0.05$), suggesting that homeowners may have higher fixed expenses that reduce their savings capacity.

Column 2 of the Table 2 reports the fixed effects model using Per capita savings as the dependent variable. When using Per Capita Savings as the dependent variable, the Social Protection Dummy remains positive and significant (coefficient = 1,457, $p < 0.05$), indicating that receiving social protection benefits increases per capita savings by 1,457 BDT on average. This suggests that social protection programs contribute to both the likelihood of saving and the actual savings amount. Disposable Income has a strong positive effect (coefficient = 0.0239, $p < 0.01$), reinforcing the income-savings relationship.

The Dependency Ratio remains negative and significant (coefficient = -48,797, $p < 0.05$), further highlighting the financial strain imposed by dependents.

Table 2: Baseline regression

This table presents the baseline model i.e., fixed effect panel regression in column (1) and (2) and Probit regression in column (3) of the impact of the Social protection on the Savings of the household in Bangladesh. Standard errors are clustered at the household level and t-stats are reported in the parentheses. Statistical significance at the 1%, 5% and 10% are indicated by ***, ** and * respectively.

	FE	FE	Probit
	(1)	(2)	(3)
Variables	Savings dummy	Percapita savings	Savings dummy
Social protection dummy	0.0278** (0.000908)	1,457** (59.37)	0.106** (0.0491)
Disposable income	3.74e-07** (5.97e-09)	0.0239*** (0.000131)	3.69e-06*** (4.06e-07)
Household size	0.00984* (0.00145)	174.6 (122.5)	0.0139 (0.0611)
Dependency ratio	-4.337** (0.261)	-48,797** (2,484)	-2.977* (1.783)
Home ownership	-0.121** (0.00940)	-2,702* (291.7)	0.490 (0.776)
Household head edu	-0.00980 (0.00269)	336.6 (71.62)	0.0425** (0.0215)
Household head emp status	0.142 (0.0730)	16,896** (908.6)	-0.782 (0.805)
Household head age	0.000782 (0.000261)	63.24* (9.821)	0.00311 (0.00472)
Household hold FE	Yes	Yes	
Year FE	Yes	Yes	
Observations	1,860	1,860	3,587
R-squared	0.693	0.709	0.0413

Robust standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

As an alternative model we implement the Probit Model in Column 3 where Savings Dummy is used as the dependent variable. The Probit estimation yields a marginal effect of 0.106 ($p < 0.05$) for the Social Protection Dummy, meaning that receiving social protection benefits increases the probability of saving by 10.6 percentage points. This result aligns with the FE model's findings and confirms the positive impact of social protection on household saving behavior. Household Head Education is also positive and significant in this specification (coefficient = 0.0425, $p < 0.05$), suggesting that more educated household heads are more likely to save.

4.2.2 Instrumental Variables (2SLS) Regression

To address potential endogeneity in the relationship between social protection and savings, a two-stage least squares (2SLS) regression is conducted using social protection coverage as an instrument for the Social Protection Dummy. The first-stage results confirm that social protection coverage is a strong predictor of social protection receipt (coefficient = 0.513, $p < 0.01$).

Table 3: 2SLS regression

This table presents the 2SLS model of the impact of the Social protection on the Savings of the household in Bangladesh using social protection coverage as the instrumental variable. Column (1) and (2) are the first stage regression of Social protection dummy on the coverage. Column (2) and (4) report the second stage regression of the savings dummy and percapita savings on predicted social protection dummy. Standard errors are clustered at the household level and t-stats are reported in the parentheses. Statistical significance at the 1%, 5% and 10% are indicated by ***, ** and * respectively.

	First stage	Second stage	First stage	Second stage
	(1)	(2)	(3)	(4)
Variables	Social protection dummy	Savings dummy	Social protection dummy	Percapita savings
Coverage	0.513***		0.513***	
	(5.56)		(5.56)	
Predicted Social protection dummy		0.673***		11,668***
		(0.253)		(78.40)
Disposable income	-2.67e-07*	5.42e-07***	-2.67e-07*	0.0266***
	(-1.81)	(2.04e-07)	(-1.81)	(0.000128)
Household size	-0.018	0.0248	-0.018	411.2*
	(-0.76)	(0.0447)	(-0.76)	(58.43)
Dependency ratio	-2.201*	-2.760	-2.201*	-23,846
	(-1.67)	(2.096)	(-1.67)	(3,798)
Home ownership	0.084	-0.115	0.084	-2,617*
	(1.30)	(0.0893)	(1.30)	(211.8)
Household head edu	0.003	-0.0102	0.003	329.6
	(0.31)	(0.0126)	(0.31)	(56.29)
Household head emp status	0.503	-0.269	0.503	10,391*
	(1.54)	(0.541)	(1.54)	(1,140)
Household head age	0.001	-0.000398	0.001	44.56*
	(0.63)	(0.00438)	(0.63)	(6.376)
Household hold FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	1,860	1,860	1,860	1,860
R-squared		0.284		0.020

In the second stage, the instrumented Social Protection Dummy remains positively associated with savings. Specifically, receiving social protection increases the probability of saving by 0.673 ($p < 0.01$), reinforcing the baseline findings. When the dependent variable is Per Capita Savings, the effect is even larger, with a coefficient of 11,668 BDT ($p < 0.01$). These results confirm that social protection significantly enhances both the likelihood and amount of household savings, even after controlling for endogeneity concerns.

5. Conclusion

This study examines the impact of social protection programs on household savings behavior in Bangladesh using data from the Bangladesh Integrated Household Survey (BIHS) for the years 2011, 2015 and 2018. Employing a fixed effects (FE) model and an instrumental variable (IV) approach, we find robust evidence that receiving social protection benefits is positively associated with both the likelihood and the amount of household savings.

Our fixed effects model suggests that households receiving social protection benefits are 2.78 percentage points more likely to save compared to those that do not. The results remain consistent when using per capita savings as the dependent variable, indicating that social protection programs contribute to actual savings accumulation. To address potential endogeneity concerns, we employ a two-stage least squares (2SLS) approach, using social protection coverage as an instrument. The IV results confirm the positive impact of social protection on savings, reinforcing the baseline findings. The strength of the instrument is validated through a strong first-stage F-statistic and Hansen's J test supports its exogeneity.

These findings have significant policy implications. They suggest that social protection programs not only provide short-term financial relief but also enhance household financial resilience by encouraging savings. This, in turn, can contribute to long-term economic stability and poverty alleviation. Policymakers should consider strengthening social protection schemes and designing programs that incentivize savings behavior, ensuring that beneficiaries can build financial buffers against economic shocks.

Future research could explore the differential impact of various types of social protection programs on household savings, as well as examine potential spillover effects on investment and consumption behavior. Additionally, expanding the analysis to urban households could provide a more comprehensive understanding of how social protection influences financial decisions across different socioeconomic contexts.

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How much gender income inequality accrues due to climate-induced migration? New evidence from Bangladesh

Azreen Karim¹

Abstract

How much gender income inequality accrues due to climate-induced migration? What are the key drivers in the gender gap governance framework to achieve gender parity across development dimensions among affected communities? We ask these questions by examining two (2) dimensions of gender parity: economic participation and opportunity and educational attainment.

This paper aims to investigate the impacts of climate change on gender gap across economic development dimensions i.e., income, education, employment and livelihood strategies. We identify a total of 403 climate-affected internally migrated and non-migrated households in selected rural and urban sub-districts of coastal Bangladesh in destination locations only. We select a retrospective timeline of year 2020 due to occurrence of a major natural event i.e., Cyclone Amphan³ and therefore adopt purposive sampling to identify migrated households triggered by this extreme event and other climate-induced natural disasters subsequently. We employ a mixed method approach and focus on 1001 male and 922 female members who had internally migrated to move out of climate risk areas. Our results show that women in climate migrated households in the rural areas earned BDT 3627.5 less compared to the nationally representative amount as indicated (i.e., BDT 2359) which might accrue due to climate change.

This income differential is BDT 1452.3 among climate-migrated households in the urban locations compared with the nationally representative gender earnings gap i.e., BDT 5517, indicating climate-induced internal migration to urban locations being more favourable for women. We find significant gender gaps persist in day (casual) laborer (non-agriculture) and paid jobs category for migrated households in the rural and urban locations. We also find evidence of persisting wider gender gaps in the tertiary education sector in the rural areas for both household groups along with wider gender gaps in the higher secondary sector in the urban regions for climate-affected migrated households in the coastal belt. Policy wise, the earnings gap should be addressed through livelihood diversification and vulnerability reduction strategies focusing on gender safety net and network-based community groups prioritizing women's economic leadership to achieve equity in the governance framework.

Keywords: Climate change; Income gap; Gender equity; Gender gap governance framework; Economic participation and opportunity; Educational attainment; Coastal belt.

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1. Introduction

A growing literature recognizes differential effects of climate change on gender issues, particularly on women. There has also been an emerging literature on the impacts of migration due to climate change and their regional implications on gender-oriented norms and issues. These include effects on poverty, food security and livelihoods (e.g., Karim, 2018; Karim and Noy, 2018, 2016a, 2016b; Iheke and Agodike, 2016; Safrade Campos, 2016; Hallegatte et al., 2015; Mueller et al. 2014; Green et al. 2010); effects on gender norms and women (e.g., Evertsen and Van der Geest, 2020; Islam and Shamsuddoha, 2017; Curran et al. 2016; Joarder et al., 2013) and on displacement (e.g., Haque et al., 2020; Hossain et al. 2020). These studies have explored the differential impacts of climate-induced migration in an isolated manner. This is the first study in which climate change-gender nexus issues have been looked at with having a focus on climate-induced migration under a single framework contributing to this gap in the ‘Climate-Development’ literature.

How much gender income inequality accrues due to climate-induced migration? Do these differ across disasters and their coping mechanism? We ask these questions by examining two (2) dimensions of gender parity identified in the global gender gap governance framework: economic participation and opportunity and educational attainment.² The objective of this paper is to investigate the impacts of climate change on gender gap across economic development dimensions (i.e., income, education, employment and livelihoods etc.) and examine the patterns of economic opportunities and challenges after climate-induced migration. Therefore, we identify climate-affected migrated and non-migrated households and search for evidence against the contemporary gender gap dimensions to investigate the likely impact of climate change in this study and thus highlight some key recommendations with embedded challenges herewith intended to close this gender gap which climate change might exacerbate.

The paper has been organized as follows: Section 2 provides a review of the relevant literature as evident in Bangladesh and other developing countries. We present details of data collection and methodology in Section 3. Section 4 analyses the empirical results and in Section 5, we conclude with some policy remarks to reduce gender inequality in the context of climate change and internal migration in Bangladesh.

2. Literature review

Recent studies had investigated the effects of climate-induced migration on poverty, food security and livelihoods (e.g., Karim, 2018; Karim and Noy, 2018, 2016a, 2016b; Iheke and Agodike, 2016; Safrade Campos, 2016; Hallegatte et al., 2015; Mueller et al. 2014; Green et al. 2010). Hallegatte et al. (2015) show that without rapid inclusive development, climate change would likely spark higher agricultural prices and could threaten food security in poorer regions such as Sub-Saharan Africa and South Asia. In a case study on adoption of climate change mitigating measures by smallholder farmers in Imo State, Nigeria; Iheke and Agodike (2016) suggested that drainage/flood barrier construction, multiple cropping, mulching, use of improved varieties of crops, change of planting date, irrigation of crops, planting of cover crops, tree planting, education and training of farmers and provision of credits are key to coping and building resilience against the impacts of climate change and hence could potentially lift

2 These gender gap dimensions are found to be closely aligned with the key dimensions of the Global Gender Gap Index Framework (see Global Gender Gap Report 2024).

rural smallholder farmers out of poverty and food insecurity. However, assisted migration could also offer a tool to improve production, sustainability and resilience; in particular, improved egg production and growth of the fishery (Green et al., 2010). Policy wise, this type of migration pattern needs to be aligned with the skill sets of the migrant households who in most cases are found to be permanent.

This finding is also confirmed by Joarder et al. (2013) that reveals migrants who were previously engaged in agriculture or fishing are more inclined to migrate permanently. Using a 21-year longitudinal survey conducted in rural Pakistan, Mueller et al. (2014) find that migration is correlated with relief efforts associated with the types of climate-induced natural events e.g., flood, heat stress etc. Despite flooding (a climate shock associated with large relief efforts) is found to exhibit modest to insignificant impacts on migration; heat stress, however (which has attracted relatively little relief) consistently increases the long-term migration of men, driven by a negative effect on both farm and non-farm income. Safra de Campos (2016) revealed that the welfare system in Brazil, compared to other countries, has direct implications on livelihoods and on the movement of individuals who could otherwise have engaged in seasonal or permanent migration due to climatic events.

There has also been an emerging literature on the impacts of migration due to climate change and their regional implications on gender-oriented norms and issues. These include effects on gender norms and women (e.g., Evertsen and Van der Geest, 2020; Islam and Shamsuddoha, 2017; Curran et al. 2016; Joarder et al., 2013). Evertsen and van der Geest (2020) addresses how gender norms impact the process of migration and what this means for the use of migration as an adaptation strategy to cope with environmental stressors. Data revealed that women migrate when environmental stress threatens livelihoods and leave male household members unable to earn enough income for their families. While social costs negatively affect the utilization and efficiency of female migration as an adaptation strategy to environmental stressors, it becomes clear that female migration is imperative to sustain livelihoods within the Bhola community. Curran et al. (2016) substantiate by evaluating the distinct effects of climatic change and modelling these effects on men's and women's responses to drought and rainfall.

During periods of prolonged climatic stress, the study found modest but significant increases in migration above existing levels and these patterns vary by gender and land tenure.

Joarder et al. (2013) examined whether environmental migrants in Bangladesh move permanently or temporarily. Females are more inclined to migrate temporarily, a finding which is consistent with prior studies that argued female migration is one temporary household survival strategy in the face of an environmental crisis. Those households who reported that they had lost assets due to environmental hazards are shown to have a higher probability of becoming permanent migrants.

In contrast, loss of livestock and crop failure are associated with a greater likelihood of temporary migration. Islam and Shamsuddoha (2017) showed that the dramatic onset disasters usually caused mass displacement, while the slow onset disasters affected the environment, local ecosystem services and employment opportunities that forced people to undergo routine economic migration at first, followed later by permanent migration. This permanent migration had long-term negative consequences on their livelihoods in terms of poverty and especially for women, the elderly and those with a disability.

3. Data collection and methodology

We employ survey (i.e., quantitative) tools to collect data to understand various facets of the nexus between climate-induced migration and gender in Bangladesh. We have selected a few vulnerable regions in the coastal belt through multi-stage selection process and focus on climate migrated households who had internally migrated after being affected by climate-induced natural disasters since 2020. We select a retrospective timeline of year 2020 due to occurrence of a major natural event i.e., Cyclone Aphan³ and therefore adopt purposive sampling of identifying migrated households triggered by this extreme event and other climate-induced natural disasters subsequently till the survey period during September-October 2023. We further select a group of non-migrated households who are climate-affected but did not migrate. It needs to be noted here that both migrated and non-migrated households have been identified and surveyed in the destination regions only on the coastal belt.

We strategize our household selection based on their mobility patterns after being affected by climate-induced natural disasters since the year 2020. We adopt a purposive sampling approach and select a representative sample of approximately 100 climate-affected households per District (Zila) with an accumulated number of 403 households from eight (8) selected Upazilas across two (2) administrative divisions. Our representative sample encompasses 70 percent migrated and 30 percent non-migrated households out of per 100 purposive samples from each Upazila.

Table 1: Regional location of the household sample

Division	District	Upazila	Location	Number	Total
Barishal	Barguna	Pathorghata	Rural	21	34
			Urban	13	
		Taltoli	Rural	39	66
			Urban	27	
Khulna	Bagerhat	Mongla	Rural	28	28
			Urban	0	
		Shoronkhola	Rural	50	72
			Urban	22	
	Khulna	Dacope	Rural	22	39
			Urban	17	
		Koyra	Rural	47	64
			Urban	17	
	Satkhira	Assassuni	Rural	30	36
			Urban	6	
Shyamnagar		Rural	29	64	
		Urban	35		
N=2	N=4	N=8			403

Source: Climate-induced Migration and Gender Survey 2023.

We identify gender gaps, as defined by the disparities in indicators between male and female, primarily in three (3) categories/pillars: i) Gender gap in employment and sectoral livelihoods; ii) Gender gap in income and iii) Gender gap in educational attainment. In each of these pillars, we identify evidence where the gender gap is found to be wider (higher) i.e., positive (+); and highlight the indicators in

³ Super Cyclonic Storm Amphan was an extremely powerful and catastrophic tropical cyclone that caused widespread damage in Eastern India, specifically in West Bengal and Odisha and in Bangladesh, in May 2020.

which gender gap had been observed to be narrower (lower) i.e., negative (-). It needs to be noted here that positive (+) sign denotes better-off scenarios for males whereas negative (-) sign indicates that females are better-off in the similar context.

4. Empirical results

Our aim in this study is to understand the gender gaps across the gender parity indicators among climate-affected migrated and non-migrated households located in the rural and urban region of the coastal belt in Bangladesh. Our survey design allows us to analyse both male and female from these two (2) groups of households: migrated and non-migrated. Here, we define gender gap as the percentage differences across selected indicators between men and women. A positive (+) gap indicates the disparities between male and female is wider (higher) and a negative (-) sign denotes that the differences has been narrower (lower) i.e., inequalities has been lessened showing progress across the gender parity dimensions. We analyse two (2) dimensions identified in the global gender gap governance framework: Economic participation and opportunity and Educational attainment. Here, our proxy indicators are employment and sectoral livelihoods and gender income (including IGAs) (for economic participation and opportunity) and highest educational level (for educational attainment).

4.1 Gender gap in employment and sectoral livelihoods

We analyze the gender gap in employment and sectoral livelihoods using the current employment status of male and female members of migrated and non-migrated households in the rural and urban region. We identify sixteen (16) categories of employment; namely employer/entrepreneur, self-employed (agriculture), self-employed (non-agriculture), contributing family member, paid employee, day (casual) laborer (agriculture), day (casual) laborer (non-agriculture), apprentices/intern (if paid), domestic worker, collecting fish, fishing, poultry farming, driver (easy bike, van etc.), animal husbandry, sewing and others. Table 2 below reports the significant gender gaps in selected categories of employment for rural and urban migrated households.

Table 2: Gender gap in employment status – rural and urban migrated households

Employment Status	Gap (R-Migrated)	Gap (U-Migrated)
Employer/Entrepreneur	3.13**	4.33
Self-employed (Agriculture)	0.76	5.36
Self-employed (Non-Agriculture)	-0.5	4.66
Contributing family member	-30.7***	-50.64***
Paid employee	11.05***	13.84**
Day (Casual) labourer (Agriculture)	1.2	1.04
Day (Casual) labourer (Non-Agriculture)	16.98***	27.34***
Fishing	1.71	1.1
Poultry farming	-1.71***	-2.33

Source: Author’s calculations based on Climate-induced Migration and Gender Survey 2023.

Note: ^a R-migrated represent gender gaps in rural migrated and U-migrated represent gaps in urban migrated households.

^b ‘*’ indicate statistically significant at the 10% level. ‘**’ indicate statistically significant at the 5% level.

‘***’ indicating significance at the 1% level ($p < 0.01$). No asterisk indicates that the difference is not statistically significant at the 10% level.

Our results show that gender gap is significantly wider in day (casual) laborer (non-agriculture) i.e., 16.98 percent, which is followed by paid employee (i.e., 11.05%) and employer/entrepreneur (i.e., 3.13%) among migrated households in the rural areas. It has been revealed that males from migrated households shifted from river fishing to various professions, including non-agricultural day laborer roles such as shoe stitching, cleaning, barbering and teaching. Women participated in income-generating activities such as tailoring, vegetable cultivation, small businesses and animal husbandry. We found an almost similar trend for migrated households in the urban region. The gender gap is found to be significantly wider for day (casual) laborer (non-agriculture) i.e., 27.34 percent and paid employee (e.g., 13.84%), while significantly became narrower for contributing family member (i.e., -50.64%) category in the urban region. Women were found to engage in agriculture, animal husbandry, part-time work, sewing, stitching and vegetable cultivation after migration. It is also important to note that local NGO initiatives (in terms of financial support, training facilities and others) are found to be correlated with the choice of occupations and/or occupational shifts for migrated households in the rural and urban coastal destinations.

Table 3: Gender gap in employment status – rural and urban non-migrated households

Employment Status	Gap (R-Non-Migrated)	Gap (U-Non-Migrated)
Employer/Entrepreneur	4.1***	11.11
Self-employed (Non-Agriculture)	10.71**	-46.67*
Day (Casual) labourer (Non- Agriculture)	19.83***	22.22
Fishing	10.03***	22.22
Poultry farming	-1.12	-8.89

Source: Author’s calculations based on Climate-induced Migration and Gender Survey 2023.

Note: ^a R-migrated represent gender gaps in rural migrated and U-migrated represent gaps in urban migrated households.

^b*,** indicate statistically significant at the 10% level. ‘***’ indicate statistically significant at the 5% level.

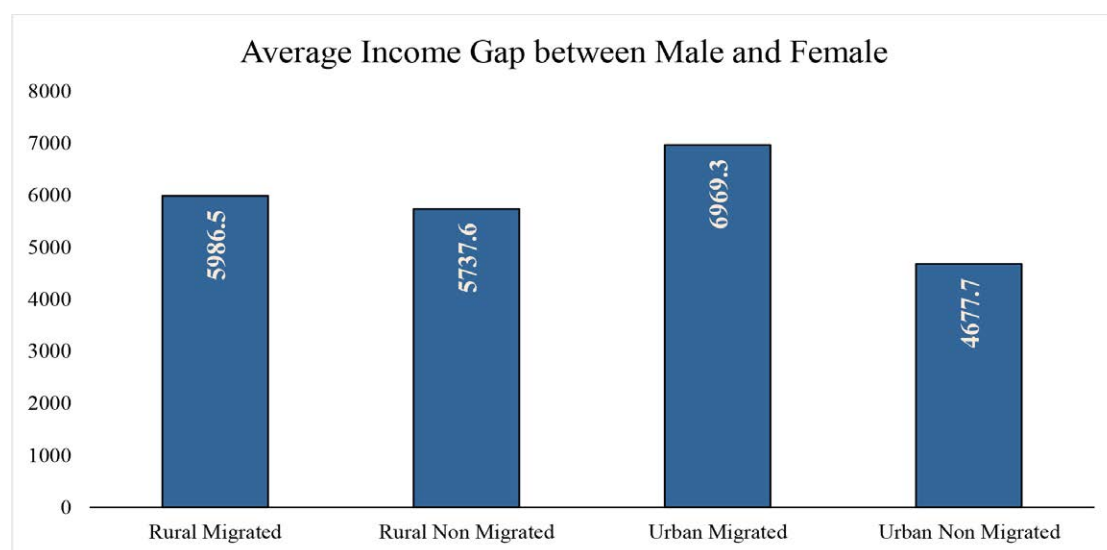
‘****’ indicating significance at the 1% level ($p < 0.01$). No asterisk indicates that the difference is not statistically significant at the 10% level.

We further examine the employment status for non-migrated households in the rural and urban region in table 3. The types of employment in which the gender gap is significantly higher is day (casual) laborer (non-agriculture) i.e., 19.83 percent, self-employed (non-agriculture) i.e., 10.71 percent, fishing i.e., 10.03 percent and employer/entrepreneur i.e., 4.1 percent respectively. The categories in which male-female disparities are found to be lower i.e., female participation have increased are contributing family member (i.e., -41.93%), collecting fish (i.e., -1.68%) and animal husbandry (i.e., -1.68%). Intriguingly, evidence shows that gender gap has significantly been reduced in the self-employed (non-agriculture) category i.e., -46.67 percent in the urban region. This is primarily due to access to finance (loans) and availability of training and other facilities from the NGOs and local government initiatives. This is primarily due to access to finance (loans) and availability of training and other facilities from the NGOs and local government initiatives.

4.2 Gender gap in income

Economic participation and opportunity are an important parity dimension identified in the global gender gap report 2024; and we attempted to analyze gender gap in average monthly income among climate-affected migrated and non-migrated households in the rural and urban region. We calculate male and female income based upon household members individual responses on their monthly earnings. However, this income does not include households' other annual (gross) income as it has been recorded on a household basis.

Figure 1: Gender gap in average monthly income



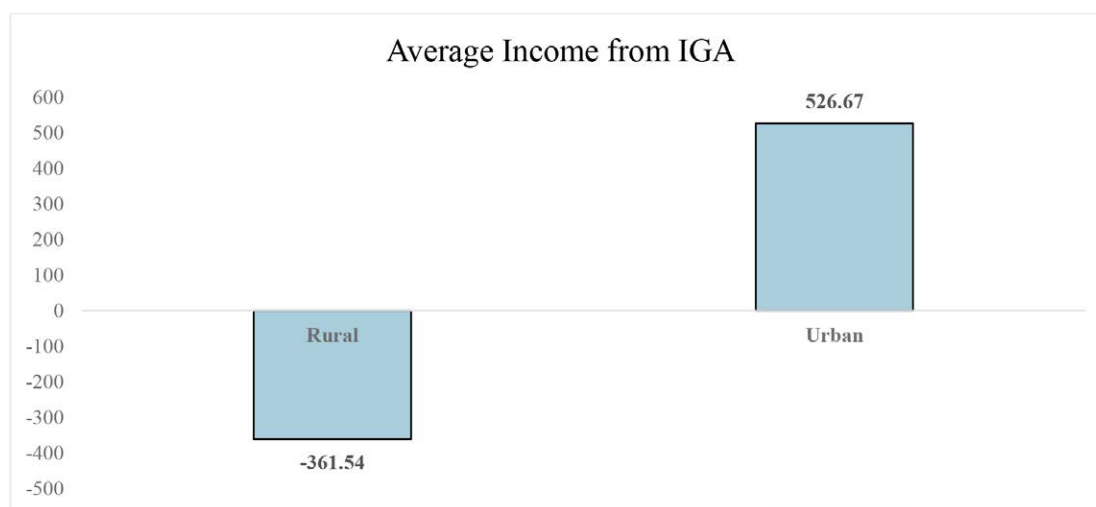
Source: Author's elaborations using Climate-induced Migration and Gender Survey 2023.

Our results indicate that for migrated households, the gender income gap in both the rural and urban locations is significantly wider (higher). We found that the rural gender income gap is around BDT 5986.57 while the urban gender income gap is around BDT 6969.36. We believe, this gender disparities in average monthly income are perhaps due to the occupational choices, opportunities and their changing patterns; and of course, access to financial and other support. Migrated households often move from climate-affected regions, which might be economically depressed, to areas less affected by climate change with more robust economies and job markets. They diversify their livelihoods to reduce the risk associated with climate impacts.

This diversification often leads to higher and more stable incomes compared to those who remain in vulnerable areas and rely on climate-sensitive livelihoods like agriculture. It has been evident that the dimensions of occupation went through changes/transformation due to migration. For example, men are found to adopt diversified professions and opted for a shift from their previous occupation e.g., fishing, in particular. They were involved in substantial construction activities, paddy farming, motorcycle, rickshaw and van driving and other non-agricultural endeavors. Few people managed to

establish permanent businesses or secure permanent jobs after migration as well. Therefore, for many male migrants, this led to a change in the type of work with increased opportunities in some cases. On the other hand, the female migrants demonstrated a keen interest to engage in income-generating activities, with aspirations encompassing poultry farming, fish cultivation and vegetable cultivation. Nevertheless, the scarcity of available land posed a considerable constraint to their occupational choices. Moreover, migrated households might receive support from government programs or NGOs aimed at helping climate migrants adapt and integrate into new areas. Some climate migrated households might benefit from emergency relief, rehabilitation programs, or climate adaptation funds, which can provide necessary support to boost their income. On a similar note, for non-migrated households, although the gender income gap is higher (i.e., positive) in both the rural and urban context, this income is not found to be statistically significant.

Figure 2: Gap in average IGA income between migrated and non-migrated households



Source: Author's elaborations using Climate-induced Migration and Gender Survey 2023.

Furthermore, we recorded income earned through women's income-generating activities (IGA). IGA refers to those income generating work that family members, especially female members, can do together and responses have been recorded from female household members only. Therefore, the IGA income gap indicates differences between migrated females and non-migrated females in the rural and urban region. Our gap analysis between female migrated and female non-migrated income shows that income gap in IGAs has been narrower i.e., BDT -361.54 (indicating non-migrated female income is higher) in the rural areas; whereas gap is wider i.e., BDT 526.67 (indicating migrated female income is higher) in the urban areas (but this is not statistically significant).

4.3 Gender gap in educational attainment

Educational attainment is an important gender parity indicator according to the Global Gender Gap report 2024. Our sample allows us to analyze the gender disparities among migrated and non-migrated households located in the rural and urban region. We compare percentage differences between male and female across the educational levels and attempt to identify whether the gaps are significantly wider or not in our sample households.

Table 4: Gender gap in educational attainment – rural and urban

Highest education	R-Migrated	U-Migrated	R-Non-Migrated	U-Non-Migrated
No Education	-4.96*	-4.64	0.54	18.57
Below Primary	2.83	0.34	-3.23	1.43
PSC-Below Secondary	-2.02	-2.41	-8.22**	-17.14
Secondary	-0.39	-4.24	3.98*	-10.00
Higher Secondary	1.53	7.05**	2.21	
Tertiary	2.01*	1.57	2.87**	7.14
Others	1.01**	2.34	1.85**	

Source: Author’s calculations based on Climate-induced Migration and Gender Survey 2023.

Note: ‘*’ indicate statistically significant at the 10% level.

‘**’ indicate statistically significant at the 5% level. No asterisk indicates that the difference is not statistically significant at the 10% level.

For households located in the rural areas - migrated and non-migrated, the gender gaps are significantly wider at the tertiary level (i.e., 2.01% and 2.87%) and others (i.e., 1.01% and 1.85%) category, while the same has been observed at the secondary level (e.g., 3.98%) for non-migrated households only. Interestingly, in the urban region, we found the gap to be significantly wider, particularly at the higher secondary level (i.e., 7.05%) for migrated households only. On a positive note, significant improvement has been observed at the PSC-below secondary level (e.g., -8.22%) in the non-migrated households with substantially reducing the number of non-educated females (i.e., -4.96%) in migrated households in the rural coastal areas.

5. Conclusion and policy remarks

This paper aims to investigate the impacts of climate change on gender gap across economic development dimensions i.e., income, education, employment and livelihood strategies. To understand the key drivers in the gender gap governance framework to achieve gender parity across development dimensions among climate-induced migrated and non-migrated households; we examine two (2) dimensions of gender parity: economic participation and opportunity and educational attainment. We select two (2) proxy indicators from the economic opportunity and participation dimensions for this gender gap analysis. They are: Employment and sectoral livelihoods and Estimated earned income.

We analyze the gender gap in employment and sectoral livelihoods using the current employment status of male and female migrated and non-migrated household members in the rural and urban region. Our results show that the gender gap is significantly wider in day (casual) laborer (non-agriculture), which is followed by paid employee and employer/entrepreneur among migrated households in the rural areas. For non-migrated households, the types of employment in which gender gap is significantly higher is day (casual) laborer (non-agriculture), self-employed (non-agriculture), fishing and employer/entrepreneur respectively. It has been revealed that males from migrated households shifted from river fishing to various professions, including non-agricultural day laborer roles such as shoe stitching, cleaning, barbering and teaching. Interestingly, evidence shows that gender gap has significantly been reduced in the self-employed (non-agriculture) category for non-migratory cases in the urban region.

There has been a feminization of agriculture in Bangladesh, yet a large share of women remains confined to home-based and low or unpaid work; and even among paid agricultural workers, rural women are more likely than men to be in vulnerable employment. This evidence further re-emphasizes the fact that there still exists significant gender-specific barriers towards diversified and high-paid jobs for women and the challenges of climate change could further widen these gaps.

We find that gender income gap in both the rural and urban locations is significantly wider (higher) for migrated households. We believe the gender disparities in average monthly income are perhaps due to the occupational choices, opportunities and their changing patterns; and of course, access to financial and other support. Now, if we compare the national estimates as reported in the Labour Force Survey 2022 with our observable gender income differences, we find that women in the climate migrated households earned BDT 3627.5 less compared to the nationally representative amount as indicated (i.e., BDT 2359) which might accrue due to climatic change. Comparatively, in the urban locations the income differential is BDT 1452.3 among climate migrated households compared with the nationally representative gender earnings gap i.e., BDT 5517 as reported in LFS 2022.⁴ Furthermore, we recorded income earned through women's income-generating activities. Therefore, the IGA income gap indicates differences between migrated females and non-migrated females in the rural and urban region. Our gap analysis between female migrated and female non-migrated income shows that income gap in IGAs is wider (indicating migrated female income is higher) in the urban areas.

Our evidence on educational attainment (proxied through highest educational level) shows that for households located in the rural areas - migrated and non-migrated, the gender gaps are significantly wider at the tertiary level and others category, while the same has been observed at the secondary level for non-migrated households only. However, in the urban region, we found the gap to be significantly wider particularly at the higher secondary level for migrated households only. This evidence showcases that despite incredible progress has been achieved in primary and lower secondary education in Bangladesh, there are relatively fewer governmental programs incentivizing female tertiary education, contributing to low female enrollment and this turns out to be true in the context of climate change as well.

On current policies, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009, the Climate Change and Gender Action Plan (ccGAP) 2013 and the National Adaptation Plan (NAP) are currently in place to design action-oriented gender specific programs along with a proper guideline to integrate and address climate change induced challenges in our development policies. Our findings are found to be consistent with the government's education policy of prioritizing female education at the primary level. On the broader note, we believe, female educational attainment is important in local level adaptation program designation as evidence suggests that better female educational outcomes could lead to improvement in gender outcomes as well. For example, reduction in gender gap in female educational attainment could potentially increase female community leadership participation, female labor force participation and better female income opportunities. In practice, in adaptive social

4 We use the Labor Force Survey (LFS) 2022 report findings to calculate the gender income inequality in the rural and urban context. The LFS survey covered the population aged 15 or older living in the sampled households to obtain estimates on many socio-demographic variables classified by sex, age, educational attainment, occupation and industry. The survey involved a quarterly sample of 30,816 households from 1284 primary sampling units (PSUs) and distributed across all 64 Districts of Bangladesh.

protection programs, productive inclusion of cash/meal incentives to achieve female educational outcomes could generate better income-earning opportunities and enhance IGA management skills and could also increase female leadership in facilitating community-based savings and loan groups. This practice could further be integrated in locally-led adaptation programs where local women could be the focal of the economic and social decision-making process and increased female educational attainment could create opportunities in relevant spaces for women to participate in the adaptation process. We therefore, emphasize on gender-smart and climate-smart development interventions through identifying high-potential gender entry points (supported by programmatic approaches such as access to green jobs, adaptive social safety nets⁴ and so on) and transitioning towards institutional approaches to address and reduce the unequal gender impacts of climate change on women across diversified livelihoods and earnings gap in the gender gap governance framework.

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APPENDIX

Table a1: Summary of gender gap in economic participation, opportunity and educational attainment

Gender parity dimension(s)	Indicator(s)	Gender gap a (migrated)		Gender gap (non-migrated)	
		Rural	Urban	Rural	Urban
Economic participation & opportunity	Estimated Earned Income ^b [BDT]	5986.5***	6969.3***	5737.6	4677.7
	Paid Employee	11.05***	13.84**		
	Day (Casual) Labourer (Non-agriculture)	16.98***	27.34***	19.83	22.22
	Contributing Family Member	-30.7***	-50.64***	-41.93***	
	Self-employed (Nonagriculture)			10.71**	-46.67*
	Employer/Entrepreneur	3.13**		4.1***	11.11
	Fishing			10.03***	22.22
Educational attainment	Poultry Farming	-1.71***		-1.12	-8.89
	No Education	-4.96*	-4.64	0.54	18.57
	Below Primary	2.83	0.34	-3.23	1.43
	PSC-Below Secondary	-2.02	-2.41	-8.22**	-17.14
	Secondary	-0.39	-4.24	3.98*	-10.00
	Higher Secondary	1.53	7.05**	2.21	
	Tertiary	2.01*	1.57	2.87**	7.14
Others	1.01**	2.34	1.85**		

Source: Author’s Calculations based on Climate-induced Migration and Gender Survey 2023.

Note: ^a The formula to calculate the gender gap is male minus (-) female across the key gender dimensions.

^b The gender gap in the estimated earned income category had been calculated on an individual basis. Therefore, other annual incomes of households are not included in this estimation.



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The Role of Artificial Intelligence and Big Data in Modern Development Administration

Mohammad Mamun¹

Abstract

The integration of Artificial Intelligence (AI) and Big Data analytics in modern development administration holds transformative potential for accelerating inclusive growth and fostering prosperity in Bangladesh. *This study aims to explore the role of AI and Big Data in enhancing decision-making, service delivery and overall governance.* Specifically, it examines their application in understanding cultural sensitivity, organizational behavior and policy formulation. Given Bangladesh's diverse socio-cultural landscape, incorporating cultural awareness into AI systems is essential to ensure equitable outcomes.

The qualitative approach solely used for carried out of the present study such as critically reviewed the existing literature and observation including case studies of AI-driven initiatives and analysis of Big Data applications in public sector of the country. By contextualizing AI adoption within Bangladesh's cultural framework, the research highlights the need for cross-cultural competence and adaptive decision-making capabilities within AI systems. Hence, the study was carried out based on Desktop methodology.

Key findings indicate that AI, combined with Big Data, can revolutionize public administration by enhancing labor productivity, streamlining governance processes and promoting innovation. Bangladesh's commitment to technological advancement, as evidenced by initiatives such as "AI for Innovative Bangladesh," has already yielded substantial growth in ICT export earnings and digital transformation. However, advanced technologies like blockchain, IoT and quantum computing are yet to enable for ensuring efficient service delivery, while AI-driven insights improve policy decisions.

This research underscores the importance of integrating AI into development administration to achieve sustainable economic growth, with projections suggesting a potential doubling of GDP growth rates by 2035. By leveraging AI and Big Data, Bangladesh can foster an environment of innovation, inclusivity and prosperity, aligning with the theme of the conference: "Accelerating Inclusive Development Through Effective Development Administration for a Prosperous Bangladesh."

Keywords: Artificial Intelligence, Big Data, Development Administration, Cultural Sensitivity, Fourth Industrial Revolution, Public Sector, Evidence-based Decision.

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1. Introduction

Artificial Intelligence (AI) refers to a collection of technologies that enable machines to replicate human cognitive functions, such as learning, reasoning, problem-solving and decision-making. AI encompasses various subfields, including machine learning, deep learning, natural language processing and computer vision, which allow systems to process vast amounts of data, identify patterns and make autonomous decisions. By continuously evolving, AI enhances automation and efficiency across multiple sectors, including governance and public administration (Ahmed, 2022, Nourani, et.al.2020; Babu, 2021).

Big Data, on the other hand, represents large, complex datasets that are difficult to manage using traditional data processing techniques. These datasets originate from multiple sources, including digital transactions, social media interactions, sensor data and online platforms. Characterized by high velocity, volume and variety, Big Data requires specialized analytical tools and technologies to extract meaningful insights. When effectively utilized, Big Data analytics supports informed decision-making, enhances operational efficiency and drives strategic improvements in governance (Agustian et al.,2024).

AI and Big Data play a transformative role in strengthening governance, optimizing service delivery and improving decision-making in Bangladesh. These technologies have significantly contributed to modern public administration by enabling evidence-based policy formulation, efficient resource allocation and enhanced citizen engagement. AI-powered data analytics provides policymakers with deep insights derived from real-time and historical data. By identifying trends and forecasting outcomes, decision-makers can implement policies that address emerging challenges effectively. On the other hand, Big Data analytics assists government agencies in assessing public needs, detecting inefficiencies and ensuring data-driven governance. Machine learning algorithms can predict socio-economic trends, enabling the government to develop proactive strategies for economic growth and development. AI and Big Data enable predictive governance by analyzing patterns of social behavior, economic fluctuations and demographic changes. This aids in crisis management, disaster preparedness and resource distribution (Ding et al.,2023).

As Bangladesh continues to embrace digital transformation, the integration of AI and Big Data in governance will lead to a more responsive, transparent and efficient administrative system. By leveraging these technologies, policymakers can enhance public sector performance, ensure data-driven decision-making and build a more inclusive and citizen-centric governance framework. The adoption of AI and Big Data analytics will not only modernize governance structures but also contribute to the nation's socio-economic development and global competitiveness.

Bangladesh is adopting AI to further advance its digital transformation, a journey that began over a decade ago. AI is now poised to act as a catalyst in this ongoing process. For operating and functioning 5G technology, advanced technologies such as IoT, using robot, decision making by analyzing big data and AI and blockchain becoming increasingly prevalent in the country. Technology is essential and the future depends on it. Bangladesh is dedicated to this technological path, encapsulated in the slogan "AI for Innovative Bangladesh". Because of emphasizing on advanced technology and ICT, the country's ICT export earnings have grown significantly, from just \$26 million in 2008 to nearly \$1 billion today since the country has invested substantially in different relevant sectors which includes Hi-Teck, Data center and IT training and Incubation centers etc. Hence, AI has significant impact on

increasing the GDP of the country. It is evident that the AI has ability to increase the annual economic rates twice within 2035 through changing the environment and nature of the work (GoB, 2020a). As a result, labor productivity could rise up to 40% through developing their capacities and skills which provide opportunity to human being to utilize their time more efficiently. Moreover, the PWC predicts that with in 2030, the world will observe around 45% gains in terms of total economic growth which will motivating innovation in case of customer demand and their products (Azam, 2020).

2. Literature Review

Artificial Intelligence (AI) and Big Data have emerged as transformative technologies in modern development administration worldwide. AI enables machines to simulate human intelligence through learning and decision-making, while Big Data refers to vast and complex datasets that require advanced analytical tools for processing. Governments increasingly leverage these technologies to enhance policy-making, improve service delivery and ensure data-driven decision-making. In Bangladesh, Big Data is primarily utilized in financial management through the IBS++ system, demonstrating its role in governance and economic administration. This literature review explores the significance of AI and Big Data in development administration, their applications in Bangladesh and the challenges and opportunities they present (Chen et al., 2013, LI, 2013 & Mohamed, 2020)

2.1 Fourth Industrial Revolution (4IR) and AI

Now a day 4IR becomes the buzz word which driven by advancements of Internet of Things (IoT), security system in terms of cyber and interconnected networks, has profoundly transformed how we live and work. By integrating these new technologies into workplaces, machines now communicate with each other and provide a holistic and inclusive picture of the entire production process, enabling faster and more autonomous decision-making. This revolution has already made significant impacts on society, the economy and industries worldwide. It is known as the continuous of Digital Revolution or 3rd Industrial Revolution. (Absar et al., 2014). Unlike its predecessors, the 4IR is unfolding globally, affecting every industry at an unprecedented speed.

However, the 1st Industrial Revolution started during 18th century but continued up to 19th century, driven by steam engines and other technological innovations, which marked a shift from agrarian societies to industrialization while advent electricity, leading to mass production and further technological advancements was the main components of 2nd Industrial Revolution. On the other hand, Artificial intelligence is the main elements for the 4IR which is continuously reshaping the world. Technologies like genome editing, 3D printing and AI-powered robotics are revolutionizing every aspect of human life, from art and communication to medicine and research.

A key aspect of this revolution is that it is shaped by human choices. As these technologies evolve at an accelerating pace, they are increasingly influencing personal and community life including social life as well as political arena. Hence, it is very much important how we are interacting with the technologies as well as how we are perceiving about the technology in the age of 4IR. Because if we are not committed to upgrade our relation with the machine through internalizing ourselves and using our potentiality then we cannot make a positive impact on the world. However, while we benefit from 4IR, we must also properly show respect and maintain our responsibility for maximizing the benefit (Babu, 2021).

2.2 Big Data in Development Administration

Big Data encompasses large datasets generated from various sources, including government transactions, social media and sensor networks. According to Jain et al. (2016), Big Data exhibits high volume, velocity and variety, making traditional data-processing techniques inadequate. Governments worldwide use Big Data to analyze trends, predict policy impacts and enhance administrative efficiency (Udeh et al., 2024). The integration of Big Data into public administration fosters data-driven governance, improving transparency and accountability.

2.3 Artificial Intelligence in Development Administration

AI refers to technologies that mimic human cognitive functions, including machine learning, natural language processing and predictive analytics (Collins et al., 2021). AI enhances decision-making by identifying patterns in data, automating administrative tasks and personalizing service delivery. Yaiprasert and Hidayanto (2024) highlight AI's role in optimizing government operations by reducing costs and improving efficiency.

2.4 Application of Big Data and AI in Bangladesh

In Bangladesh, the government employs Big Data primarily in financial management through the Integrated Budget & Accounting System (iBAS++). iBAS++ is an integrated financial data platform that consolidates real-time financial information to support economic planning and budgetary control. This system enables the government to monitor expenditures, forecast financial trends and improve fiscal transparency. The implementation of iBAS++ demonstrates the potential of Big Data in enhancing financial governance by providing data-driven insights for policy formulation (Finance Division, 2025).

2.5 AI in Public Sector Decision-Making

AI applications in Bangladesh's public administration are emerging, particularly in data analytics and decision support systems. AI-driven analytics assist in identifying inefficiencies, fraud detection and risk assessment in various sectors. For example, AI tools analyze large volumes of economic data to predict inflation trends, assisting policymakers in making informed economic decisions. Additionally, AI-powered chatbots and virtual assistants are being explored to improve citizen services by offering automated responses to public inquiries (Mazumder & Hossain, 2024).

2.6 AI and Big Data in Social and Economic Development

Beyond financial management, AI and Big Data are instrumental in addressing social and economic challenges in Bangladesh. The National Board of Revenue (NBR) utilizes data analytics to improve tax collection efficiency, while AI-driven predictive models help the health sector track disease outbreaks. Similarly, AI-powered agricultural monitoring systems analyze satellite imagery to optimize crop yield predictions, benefiting farmers and policymakers alike (Rahman, & Parvin, 2024, & Mohammad, & Derbali, 2024).

2.7 Challenges in Implementing AI and Big Data in Bangladesh

Despite the potential benefits, Bangladesh faces several challenges in the adoption of AI and Big Data in development administration:

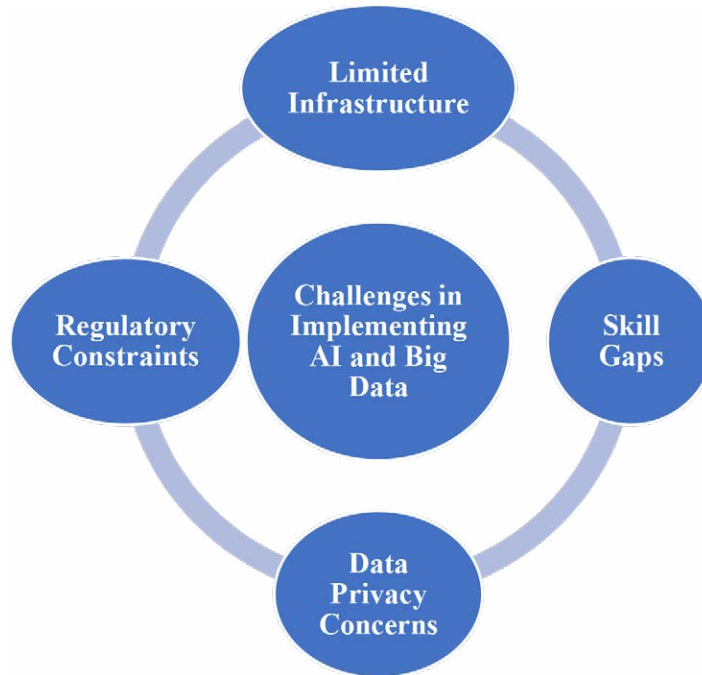


Figure-2.1: Main Challenges in Implementing AI and Big Data

Among the above-mentioned components, Data privacy and Skill Gaps are very crucial for Bangladesh (Mazumder, & Hossain, 2024).

2.8 Opportunities for Future Development

Since it is a new area for Bangladesh, however, present study has been explored different scholarly works in the field of Big Data and AI, particularly in the context of Bangladesh. Consequence of which most of the scholars emphasized the following arena in the aspect of AI and Big Data for future public administration of the country:

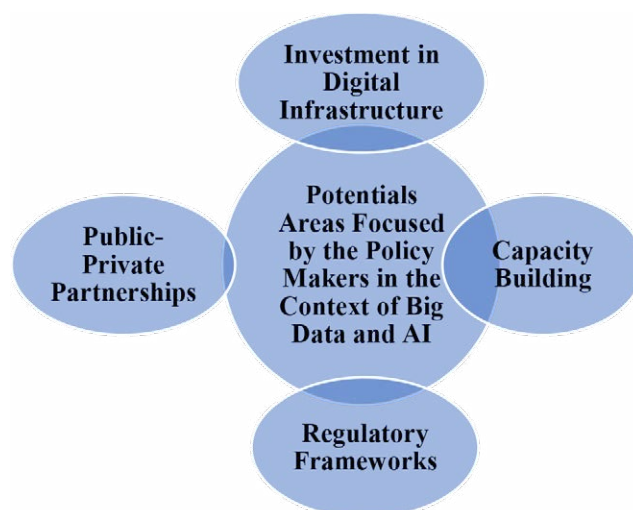


Figure-2.2: Potential areas of the country for further investing in the context of AI and Big Data

AI and Big Data have significant potential to transform development administration in Bangladesh. While the country has made strides in utilizing Big Data for financial management through IBS++, broader adoption of AI-driven solutions remains in its early stages. Addressing infrastructure limitations, skill gaps and regulatory challenges will be critical in harnessing these technologies for improved governance and socio-economic development. With strategic investments and policy support, Bangladesh can fully leverage AI and Big Data to drive innovation in public administration and ensure efficient service delivery (Tamim et al., 2024, Haque et al., 2021 & Alam et al., 2023)

2.9 AI Adoption in Bangladesh

Though the AI seems very new concept in the present world, indeed it is very is very old concept. The “automatons,” was a machine which was invented long before by the ancient inventors and it was able to operate without intervention of human beings. In the 1st phase of 20th century (1900-1950), media focused heavily on the idea of human being with artificial brain which influenced and instigated scientist to innovate the artificial brain for human being so that they can work as like super human being. Some even developed simple versions of “robots” or artificial people, marking the first known use of the term (Karel, 1923). In 1949, Edmund Callis Berkley, a computer scientist, published *Giant Brains, or Machines that Think*, for comparing innovated moder computer with real brain of human (Berkeley, 1952). This work encouraged a scientist named 1 Alan Turing to further develop the work of Edmund Callis Berkley. Therefore, in 1950 he presented Turing Test to assess computer intelligence through the publication of *Computer Machinery and Intelligence* (Turing, 2009). The term “artificial intelligence” subsequently gained popularity, especially after computer scientist Arthur Samuel developed a checkers program in 1952 that could learn independently. In 1955, John McCarthy formally defined “artificial intelligence” at a Dartmouth workshop, a term that has since become widely used (PwC and ASSOCHAM, 2017). However, the world has observed a breakthrough in the area of AI research and developing since the government around the world funded heavily on this sector during 1980.

This era, known as the “AI boom,” since the machine, particularly advance computer machine, able to learn from their mistake and take reasonable decision by using expert techniques that is deep learning autonomously. This period also marked as broader adoption of AI in various industries, leading to

significant changes in the workforce, the rise of automation and advancements in robotics and autonomous vehicles (Tableau, 2024).

Recently, we have witnessed a significant progress of automation development because of advanced level using and advancement of AI technology across the globe. Thus, notable progress in case of production and efficiency are visible since we are using substantially AI technologies in our industries and other purposes. By automating repetitive tasks that are often undesirable for humans, AI has become a widely adopted tool in fields such as healthcare and transportation.

As a result, countries like the UAE have appointed a state minister for AI, while others, including neighboring India, have made substantial investments in AI research, establishing AI task forces and institutes. China aims to become a leading hub for AI technology and Japan, in 2016, established the Strategic Council for AI Technologies to advance AI research, education, skills and business (Wahid-Uz-Zaman, 2019).

Now, scientists, around the world, are trying to innovate such type of machine which will be able to work like a human brain. Therefore, this industry is one of the most growing sectors in case of developing complex algorithm as like brain of human. Consequence of which huge investment in this sector both in terms of policy and financing. Many attempts were taken to develop AI that can learn, comprehend and operate in ways similar to human cognition. It is estimated that between 2022 and 2030, the global AI market will grow from \$38.1% to \$93.5 billion (CAGR) as ongoing research on AI is enhancing operational efficiency of critical business areas.

In Bangladesh, AI research is still in its early stages, with only a limited number of applications across various areas or sectors. However, impassive is being given both by the government and private sectors for investing more on AI research along with initiatives are being developed to increase its use all over the country. At present, agriculture, health sector and banking sector are the main users of AI in Bangladesh. In the medical field, AI is used for personalized treatment plans and improved disease diagnostics. In the financial sector, AI helps reduce fraud and optimize investment portfolios. In agriculture, AI contributes to better crop yields and precision farming techniques.

Though we have limitation in case of resource, several initiatives have been taken especially by the private sector to maximize the benefit of AI. Even, there are several policy interventions by the government for ensuring easy access to this AI technology so that all sectors of people can utilize this new technology for their betterment as well as country's development. High-Tech Parks, IT Parks and duty-free import of IT materials are some examples to support the growth of the technology sector (Iqbal, 2023) by the government.

Since, AI has the potentiality to protect lives and change the lives in a better way; its success story needs to be used repeatedly globally.

For instance, during the Covid-19 crisis, Bangladesh had only one RT-PCR laboratory for testing the virus of potential patience at the onset of the COVID-19 pandemic, Bangladesh had only one RT-PCR laboratory capable of detecting the virus which indicates the less capability of the country in case of detecting the virus. In a country with a population of around 170 million, this posed a significant challenge. However, by repurposing the national toll-free helpline and feeding the collected data into an AI algorithm, the country effectively tracked and managed the disease for the first four months,

showcasing AI's potential in developing nations like Bangladesh. The contribution of AI, in healthcare system, other than Covid-19 crisis, has tremendous positive impact country like Bangladesh where five doctors have served 10,00 people. Hence, AI has been used to reduce the administrative burden on doctors.

The pregnancy monitoring app is another notable example where AI is using to maintain health and safety of the expected mother and their new born child. Through this app, all related information has been kept and maintained for the purpose of using and reusing when and where necessary in one platform. Besides, AI is also maintaining to store and use the personal data for education purpose by the teachers and management. In this case, Noipunno initiative can be mentioned. This app is able to record more than 2 million digital data related to students. Therefore, it reduces the burden of teacher in case preparing result, checking attendance and monitoring the students in real time base. Hence, more than 5 million students and 50000 teachers were involved under Noipunno (skillful talent) activities for supporting students and teacher as per their requirement which ultimately reduce the workload of educators.

Digital literacy is another important promising area where AI plays a crucial role for reducing digital divide. Digital literacy means empowering. Because, digitally sound people are running the business and playing importance role in all areas including politics and services to the citizens. AI tools that allow people to interact with computers through speech eliminate the need for traditional word-processing skills. For instance, rural people of the country are using AI for submitting their land registration forms or getting related documents through their smart phone. They do not need to fill in any form but speaking into phone. This development offers a significant opportunity for previously marginalized voices to be heard and included in the digital landscape, although it is still in its early stages (Chowdhury, 2024).

Thus, AI has brought about transformative changes in many sectors in Bangladesh. It offers numerous benefits and has the potential to significantly improve human life. However, AI's potential is highest in sectors such as high-tech/telecom, automotive/assembly and financial services, while media/entertainment and consumer packaged goods show medium potential. Conversely, sectors like education, healthcare and tourism have seen slower adoption in the country (GoB, 2020a).

3. Methodology

This study employed a qualitative research approach, utilizing a literature review method to critically examine the role of Artificial Intelligence and Big Data in modern development administration. Given the rapid advancements in information technology over the past decade, this research focused on evaluating existing academic and policy-oriented literature to provide insights into how these technologies are shaping governance and administrative efficiency, particularly in Bangladesh. Therefore, in short, the present study was based on Desktop Research.

3.1 Research Design

The study has designed as a critical literature review, systematically analyzing existing scholarly works, policy documents and expert opinions to assess the application and implications of AI and Big Data in the public sector. The qualitative nature of this research allowed for an in-depth exploration of themes, trends and debates surrounding the integration of these technologies in development administration.

3.2 Data Collection

Data for this research were collected through a systematic literature search using academic databases such as Google Scholar, ResearchGate and institutional repositories. The selection criteria focused on peer-reviewed journal articles, government reports and policy documents etc. The review encompassed studies on AI and Big Data applications in governance, financial management and policy innovation, with a particular emphasis on their relevance to the Bangladeshi context. Special attention was given to literature discussing the implementation of Big Data in financial management through platforms like IBS++ and the broader implications for public sector decision-making.

3.3 Data Analysis

The collected literature was analyzed thematically, identifying key patterns in the adoption, benefits and challenges of AI and Big Data in public administration. The analysis involved synthesizing information from different sources to evaluate the impact of these technologies on decision-making, resource allocation and service delivery in government institutions. Additionally, the study incorporated insights from the researchers' professional experience in the public sector, allowing for an informed discussion on the practical applications and policy considerations of these technologies in Bangladesh.

4. Result and Discussion

The integration of AI and Big Data in modern development administration is a transformative phenomenon worldwide. However, Bangladesh is still in the early stages of adopting these technologies, particularly in the public sector. The study findings reveal that while the Government of Bangladesh (GoB) has taken initial steps, such as the implementation of the Integrated Budget and Accounting System (iBAS++), the overall utilization of AI and Big Data in public administration remains limited. This chapter presents the key findings of the study, discusses the implications for modern development administration and explores potential pathways for future progress.

4.1 Limited Adoption in Public Administration

The study indicates that AI and Big Data applications in Bangladesh's public sector are still in their infancy. The primary use case identified is iBAS++, an Integrated Financial Management Information System (IFMIS) aimed at streamlining financial management and enhancing service delivery. However, other sectors, including human resource management, policy planning and service optimization, remain largely untapped.

4.2 Government Initiatives and Vision

The government has expressed a commitment to expanding AI and Big Data applications across various public services. The government initiative aims to modernize governance and public service delivery, yet practical implementations of AI-driven solutions remain sparse. Despite the government will, infrastructural and technical constraints hinder the full-scale adoption of AI and Big Data. The following AI initiatives were carried out by the government of Bangladesh:

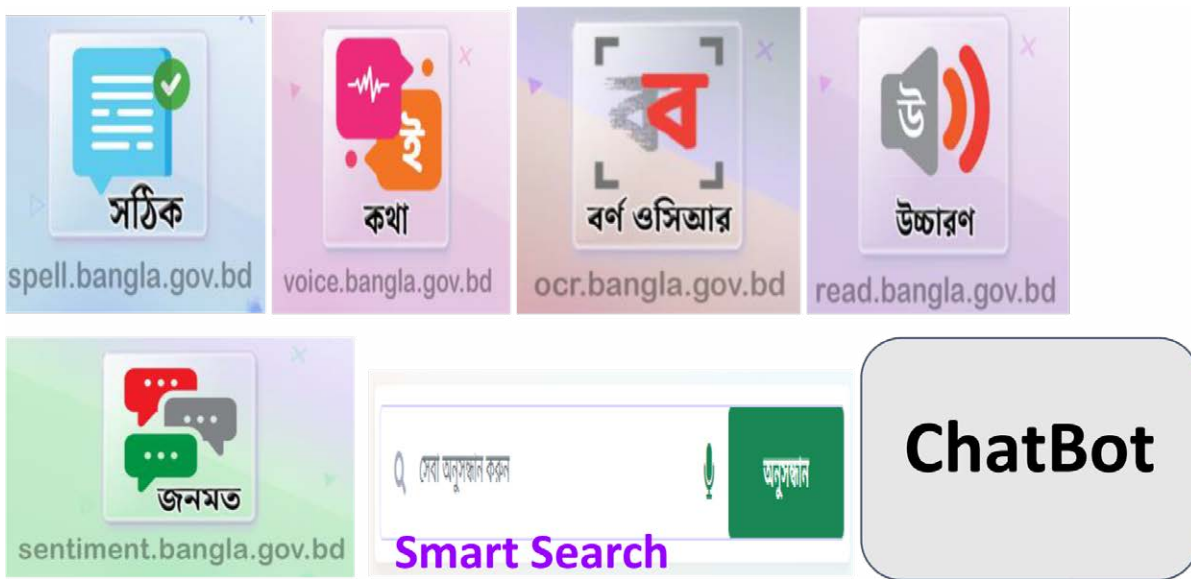


Figure-4.1: Few AI Initiatives by the Government of Bangladesh (Modified and adjusted from Information and Communication Technology)

4.3 AI-Driven Workforce Planning

In global contexts, AI and Big Data have significantly improved human resource (HR) management by enabling predictive analytics for workforce planning. Companies like Walmart and Unilever use AI to optimize staff allocation and recruitment processes. If implemented in Bangladesh's public administration, similar approaches could improve efficiency in government recruitment, workforce allocation and training programs.

4.4 Big Data for Strategic HR Decision-Making

Big Data analytics can help governments identify staffing needs based on service demand patterns. For instance, the Ministry of Public Administration could leverage data from citizen service requests, workforce performance metrics and demographic trends to allocate human resources effectively. This could enhance service delivery and reduce inefficiencies in government offices.

4.5 Enhancing Evidence-Based Policymaking

AI and Big Data provide valuable insights that can improve public policy formulation. In many developed nations, predictive analytics is used to assess social trends, economic shifts and citizen needs. Bangladesh could benefit from similar applications by using AI to analyze public sentiment, economic indicators and social service utilization patterns.

4.6 Case Study: AI in Disaster Management

Bangladesh, being prone to natural disasters, could leverage AI and Big Data for disaster response and management. AI-powered forecasting models could analyze historical data on floods, cyclones and landslides to predict future occurrences and prepare timely interventions. The Bangladesh Meteorological Department and disaster management agencies could use these tools to improve preparedness and response strategies.

4.7 Data Infrastructure and Accessibility

One of the significant barriers to AI and Big Data implementation is the lack of a centralized data infrastructure. Unlike developed countries, Bangladesh does not have an integrated data-sharing mechanism across government agencies, leading to fragmented and inconsistent datasets.

4.8 Skill Gaps and Human Capital Constraints

Another critical challenge is the shortage of skilled professionals in AI and data analytics. The study highlights a lack of technical expertise among government officials, which slows down the adoption and effective utilization of these technologies. Investment in specialized training programs and collaboration with universities and research institutions are necessary to bridge this gap.

4.9 Privacy and Ethical Concerns

Data security and ethical considerations pose significant concerns for AI and Big Data adoption. Government agencies must ensure robust cybersecurity measures and clear data governance policies to protect citizens' personal information from misuse.

4.10 Developing a National AI and Big Data Strategy

To accelerate the adoption of AI and Big Data, the government should formulate a comprehensive national strategy. This should include policy guidelines, investment plans and regulatory frameworks to facilitate a smooth transition to AI-driven governance.

4.11 Investing in Digital Infrastructure

The development of a robust digital infrastructure is crucial for AI and Big Data implementation. The government should invest in high-speed internet, cloud computing facilities and data centers to support large-scale data analytics.

4.12 Capacity Building and Training

Human resource development should be prioritized to enhance the skills of government officials and IT professionals. Establishing AI and data science training programs in collaboration with universities and international partners would be beneficial.

4.13 Piloting AI-Based Public Services

The government could initiate pilot projects in sectors like healthcare, education and law enforcement to test AI applications. For instance, AI-driven chatbots could be deployed in public service helplines to enhance citizen engagement and service efficiency.

5. Conclusion

While Bangladesh has taken initial steps toward adopting AI and Big Data in public administration, the journey is still at an early stage. The findings highlight the vast potential of these technologies in transforming governance, workforce management and policy planning. However, challenges such as infrastructure limitations, skill shortages and ethical concerns must be addressed for effective implementation. By adopting a strategic approach and investing in digital transformation, Bangladesh can harness the power of AI and Big Data to build a more efficient, transparent and citizen-centric public administration system.

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Appendices

Appendix-1: Profile of the Keynote Speaker



Professor Niaz Ahmed Khan, Ph.D. has been appointed as the new Vice Chancellor of the University of Dhaka by the Honorable President of the People's Republic of Bangladesh. He is the immediate past Vice Chancellor (Acting) of Independent University, Bangladesh (IUB) and Professor (Grade 1) and former Chairman of the Department of Development Studies, University of Dhaka.

He holds a Ph.D. from the University of Wales Swansea, UK. He secured first positions (in the first classes) in all public examinations from the Secondary School Certificate (SSC) through Master of Social Sciences (MSS-Public Administration) and received a number of scholarships and recognition for his academic excellence such as the UK Commonwealth Scholarship, University of Wales Pro-VC's Honorary Fellowship, (Ford Foundation) Asia Fellowship, University of Chittagong Merit Scholarships, Gulmeher Gold Medal Award and Cumilla Education Board Merit Scholarships and Australian Leadership Award Fellowship. Dr. Khan subsequently pursued postdoctoral research in the University of Oxford, University College Swansea and Asian Institute of Technology (AIT). His other professional qualifications include Diploma in Voluntary and Community Organisation (Swansea University; with distinction), Diploma in Personnel Management (Institute of Personnel Management; first class first) and (PG) Certificate in Interpersonal Skills for Volunteers (Lampeter University; with distinction).

Professor Khan's career reflects a rich blend of academic and practicing development management experiences gained in Bangladesh, Thailand and the UK. Besides serving as Bangladesh Country Representative of IUCN – the International Union for Conservation of Nature (the world's largest environmental network organization), some of his other senior development management positions include: Senior Programme Coordinator (CHT), UNDP-Bangladesh; Forest and Natural Resource

Management Specialist (RETA 5900), Asian Development Bank (ADB); Chairman, Bangladesh Tropical Forest Conservation Foundation; and Manager (Operations), PKSF (Rural employment Assistance Foundation). On the academic and research side, he held such positions as South Asian Fellow, Queen Elizabeth House, University of Oxford; Research Fellow, University of Wales Swansea; Professor of Public Administration, University of Chittagong; Asia Research Fellow, Asian Institute of Technology; Distinguished Visiting Researcher, The American University in Cairo; Senior Academic Adviser, BRAC Institute of Governance and Development; and Distinguished Visiting Professor, Asian University for Women (AUW). He has also extensively consulted for such organizations as the World Bank, United Nations, Asian Development Bank, United States Agency for International Development, Swansea Bay Racial Equality Council (Her Majesty's Government of UK) and Government of Bangladesh.

Dr. Khan has published prolifically (more than 170 refereed publications including some 50 in Web of Science and/or Scopus indexed journals) on such broad fields as research methodology, environment, natural resource management and social/community development. Besides his affiliation with numerous professional societies, he is also involved in extensive journal editorial and management roles.

He regularly contributes to high panel government and civil society committees and boards and acts as resource person, trainer and/or academic adviser to key national military and civil service training institutions including the National Defence College, Defence Services Command and Staff College, Bangladesh Army's Artillery Centre and School, Bangladesh University of Professionals, Bangladesh Public Administration Training Centre, National Academy of Planning and Development, Bangladesh Foreign Service Academy, Bangladesh Rural Development Academy and Bangladesh Forest Academy. He has made substantial contribution to several national policy advocacy and advisory processes and achieved several national and international recognitions – including the Special Recognition Award by the Balipara Foundation, India in recognition of his contribution to the policy and practice of social forestry and natural resource.

Appendix-1: Profiles of Attending Dignitaries



Md. Rezaul Maksud Jahedi is serving as Secretary, Local Government Division, Ministry of Local Government Rural Development & Cooperatives. He has joined in this portfolio on 07 April, 2025. Prior to this, he served as Secretary of the Ministry of Youth and Sports. As a member of BCS Administrative service, He joined this service as Assistant Commissioner and Magistrate in 1994. Mr. Jahedi has long been serving in different capacities at field administration as well as Central Government. During his service, he has a wide range of experiences in field administration as Assistant Commissioner, Senior Assistant Commission, Nezarot Deputy Collector, Land Administration as Assistant Commissioner (Land) and RDC, Magistracy, Local Government Organizations as Upazilla Nirbahi Officer and Municipal Administrator, Project Management as Project Director and Innovation and Creative activities. As part of his career, he served as Additional Secretary, Ministry of Public Administration, Director General (Additional Secretary) of Water Resources Planning Organization (WARPO) under Ministry of Water Resources, Additional Director General of Department of ICT, ICT Division, Ministry of Posts, Telecommunications and IT. Before that, he served as Deputy Director in Bangladesh Public Service Commission and Deputy Secretary under Road Transport & Highways Division, Ministry of Road Transport & Bridge from 2009 to 2016. As a Professional Civil Servant, he has a long-cherished dream to realize fulfilling the public interest. His areas of interest are evolutionary process of technological advancement of Bangladesh as well as world scenarios, policy formulation, public administration, disaster management, project management, digital economy leading to smart Bangladesh. Mr. Jahedi has achieved various national and foreign degrees during his professional life. Specifically, he acquired Master of Public Administration from Sun Yat

Sen University in Republic of China with distinction and Post Graduate Diploma in Project Management from University of Bedfordshire, United Kingdom. He has achieved M.Sc. in Disaster Management from University of Dhaka with the collaboration of Swiss Development Cooperation. He studied at IBA in Dhaka University. He was also awarded with Director General's Medal from BCS Administration Academy as the best Trainee Officer of the Law and Administration Course. He also secured the 2nd Position in Advanced Course on Administration & Development (ACAD) from Bangladesh Public Administration Training Centre. He has visited many destinations of the world for the purposes of training, seminars, workshops, negotiations and professional advancement. Mr. Jahedi widely toured USA, European countries like UK, France, Italy, Netherlands, Belgium, Switzerland, Turkey, Denmark etc., Asia and the Pacific countries and SAARC countries. Mr. Jahedi was born in Mymensingh in 1969. He is married and blessed with two daughters and one son. His wife, Dr. Mahbuba Jahan Lotus, is working as Associate Professor in Dhaka Medical College and an eminent sonologist.



Mr Iqbal Abdullah Harun, Secretary, Planning Division, Ministry of Planning, Bangladesh is a member of BCS (Administration) 10th Batch. Prior to that he has served as Additional Secretary, Ministry of Environment, Forest and Climate Change, Bangladesh. He has a diverse public service career spanning from finance management, economic management, diplomacy, national budget preparation, PFM reform, institutional capacity development to the management of environment, forests and climate change issues.

Mr Iqbal Abdullah Harun has rich experience in negotiations, cash and debt management, project management, training needs assessment, curriculum development, SDG Financing, public-private

Appendix-1: Profiles of Attending Dignitaries

partnerships, Integrated National Financing Framework and municipal investment financing.

His long experience, relevant education and technical training in dealing with development issues and challenges in developing countries provided opportunities to work for Bangladesh with all major multilateral development institutions including the United Nations, the World Bank, the International Monetary Fund and the United Nations Conference on Trade and Development (UNCTAD).

Mr Iqbal Abdullah Harun has master's degrees in geography and environment, government financial management (UK), economics (Japan). He is fluent in English, Japanese, Bangla and has completed level-2 in Spanish.



A N M Moinul Islam is a dedicated civil servant with over 26 years of progressive experience in the Bangladesh Civil Service (Administration Cadre). He currently serves as Additional Secretary at the Ministry of Public Administration, where he also oversees the Career Planning and Training Wing.

Mr. Islam holds both bachelor's and master's degrees in Economics from the University of Rajshahi, which laid a strong academic foundation for his distinguished career in public service. Throughout his tenure, he has served in a variety of key administrative roles including Assistant Commissioner, Upazila Nirbahi Officer, Additional Deputy Commissioner, Deputy Director of Local Government, Chief Executive Officer of a Zila Parishad, Zonal Settlement Officer, Additional Divisional Commissioner, Rajshahi Division, Additional Secretary, Ministry of Textiles and Jute. His diverse portfolio includes both field and central administration, policy planning and capacity development.

He has completed numerous specialized training programs at home and abroad including Mid-Career Training course at the National Centre for Good

Governance (India), Public Administration Capacity Development course at Macquarie University (Australia), the Overseas Programme on Public Administration at NAPA (Vietnam) and the Sericulture Exposure Visit and the Executive Committee meeting of International Sericultural Commission, China which have enhanced his capabilities in governance, land management and administrative reform.



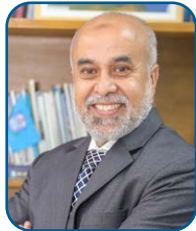
Mr. Muhammed Ali Armağan serves as the Deputy Coordinator of the Turkish Cooperation and Coordination Agency (TİKA) in Dhaka, Bangladesh. In this role, he has been instrumental in advancing TİKA's mission to foster development and humanitarian assistance across Bangladesh.

Armağan has played a pivotal role in implementing projects that span education, healthcare and refugee support. Notably, he has overseen initiatives such as providing a school bus to Moin Uddin Memorial College in Teknaf, enhancing educational access in remote areas. His efforts have also extended to the Rohingya refugee camps in Cox's Bazar, where TİKA has led projects aimed at improving living conditions including restoring playgrounds and supporting socio-cultural development.

Beyond his project management responsibilities, Armağan actively engages with local communities and stakeholders, reflecting TİKA's commitment to collaborative development. His work exemplifies the strong bilateral relations between Türkiye and Bangladesh, rooted in shared values and mutual respect.

Through his leadership, Mr. Armağan continues to contribute significantly to the socio-economic development of Bangladesh, reinforcing TİKA's role as a key partner in the region's progress.

Appendix-1: Profiles of Speakers and Experts



Professor A B M Shawkat Ali has been working in universities across Asia, Australia and the South Pacific in the area of Computer Science for over 28 years. He is a Professor and Vice-Chancellor at the Bangladesh University of Business and Technology (BUBT) and a Data Scientist Consultant for the industry. He also worked as a Senate and Council member (elected) and has chaired various programme evaluation and academic promotion committees. He obtained his PhD from Monash University, Australia, in Machine Learning. He has substantial experience as a lecturer, researcher, programme coordinator, research coordinator, Head of Department, Dean of School and Acting Vice-Chancellor. He has published over 160 Books, Book Chapters, Journals and Conference Papers. His research h-Index is 33. Under international collaboration, he established two international conferences in Fiji, the first in the South Pacific in Computer Science and Engineering. He has received over 8 million research grants from industry, government and international communities such as the EU, the USAID, the World Bank, the Canadian Grant Authority and the Australian industry. He has been awarded several awards including the Bangladesh Expatriates' Award 2023 (Research Category), Project of the Year from Thales Australia, the Vice-Chancellor Research Excellence Award from The University of Fiji, the Outstanding Leadership Award from IEEE, the Top 10 Course Designers CQUniversity, Excellence in Supervision Award CQUniversity and the Post-Graduation Publication Award Monash University. He is a Senior Member of IEEE, the world's largest professional organisation.



Mr. Md. Hafizur Rahman is the Administrator of the Federation of Bangladesh Chambers of Commerce and Industry (FBCCI). He served in the Bangladesh Civil Service for almost 30 years. He was the Director General of the WTO Cell at the Ministry of Commerce, Government of the People's Republic of Bangladesh. He also served as a Member of the Bangladesh Competition Commission.

Mr. Rahman holds an MBA in Business Administration from the Institute of Business Administration (IBA), University of Dhaka and a Master's in International Economic Relations (MIER) from the Civil Service College, Dhaka. He also studied in English Literature and earned an MA degree from the University of Dhaka. He earned a Diploma in Regional Integration of the European Union, jointly organized by the CEDDET Foundation and the University of Barcelona, Spain. Additionally, he completed both the regional and advanced trade policy courses at the WTO including advanced training in Intellectual Property and Trade, organized by the WTO and WIPO. His further training includes short courses on trade issues at Oklahoma University in the UK and a Diploma in International Trade, Environment and Sustainable Development from Macquarie University in Sydney, Australia. He has also studied the Management Appraisal System at the Asian Institute of Technology, Thailand and participated in several expert-level training programs under the WTO on Intellectual Property Rights, Trade and Environment and SPS issues. Mr. Rahman also received training on Competition and WTO Law through the ITTC WTO.

Mr. Rahman worked at the WTO Cell of the Ministry of Commerce, Bangladesh, for 16 years, where he was primarily responsible for Intellectual Property Rights and other WTO-related matters. He was a member of Bangladesh's trade negotiation committee and has extensive experience in trade negotiations at regional, bilateral and multilateral levels.

Appendix-1: Profiles of Speakers and Experts

In addition to his government service, Mr. Rahman is a frequent guest speaker on trade-related topics at the Institute of Business Administration, the University of Dhaka, the Bangladesh Foreign Trade Institute, the Bangladesh Public Administration Training Centre and other institutions. He has delivered keynote speeches at numerous national and international seminars on trade issues including events organized by the OECD, UNCTAD and UNCDF. He has also authored several articles on intellectual property regimes and trade issues in Bangladesh.



Ms. Murshida Sharmin, Joint Secretary of the Bangladesh Government, has a significant career in the field of Social Security. She has vast experience both in policy making and implementation of social security programs through her career. Since joining in the Cabinet Division, she is involved in inter-ministerial coordination and monitoring of the implementation status of the social security programs. Capacity building and providing training to the officials engaged in implementation of National Social Security Strategy (NSSS) across the Government are among the core responsibilities of Ms. Sharmin. She is also responsible to arrange meetings of the Central Management Committee (CMC) for Social Security and provides secretarial support to the Committee. Prior to joining the Cabinet Division, Ms. Sharmin has worked in the Secondary and Higher Education Division and Ministry of Land. While working in the field administration as Assistant Commissioner, she was involved in the monitoring of social security programs such as Old Age Allowance, Disaster Relief Programs, Vulnerable Women Benefits. Distribution of Khas land (government land) among landless people was one of the prime tasks of Ms. Sharmin while working as Assistant Commissioner (Land) which was inclusively social security services towards the village poor. She has attended several training courses as

well as international conferences on Social Security in Australia, Japan, Vietnam, Philippines, Turkey, Malaysia, Spain, Egypt and Thailand etc. Currently she is in charge of Civil Registration and Social Security Branch of the Cabinet Division and working as Project Director of technical assistance project named "Social Security Policy Support Project" as an additional charge.



Dr. Najmus Sayadat joined the Bangladesh Civil Service (Administration) cadre in 2001 and currently serves as a Member (Finance) at Bangladesh Rural Electrification Board (BREB) under Power Division. Prior to this position he worked as Joint Secretary at the PPP Unit of the Finance Division and as Director for investment promotion at the PPP Authority. Dr. Najmus Sayadat holds a PhD degree in Public Administration, specializing in the PPP policy implementation. He earned his Master's Degree in Economics from Ritsumeikan University, Japan and an MBA Degree from the Institute of Business Administration, University of Dhaka. Additionally, he is an APMG certified PPP Professional and a JICA certified TQM Trainer.



Dr. Md. Jahid Hossain Panir is a Joint Secretary to the Government of Bangladesh - currently working as a Member Directing Staff (MDS) at the Bangladesh Public Administration Training Centre-BPATC. Mr Panir is a Civil Servant and also a Researcher. He has extensive hands on experiences of working at the field level. At the policy formulation level, he has worked in the Ministry of Public

Appendix-1: Profiles of Speakers and Experts

Administration, Economic Relations Division, Ministry of Finance and Ministry of Land. He had significantly contributed in land management reforms and digital innovations. Under his leadership, Ministry of Land won WSIS Prize for introducing LD Tax system. Mr Panir is also an Academic Instructor & Training Curriculum Designer. He worked as an E-learning Specialist on lien. He is a Marketing Graduate from the University of Dhaka. He earned MSc in Management & Information Systems from IDPM, University of Manchester, UK. He is a Japan Govt. Monbusho Research Fellow at Hitotsubashi University, Tokyo, Japan. Mr Panir obtained his PhD in Management majoring in IT-based Knowledge Management in the public sector. He contributed to the Partnership (MOU Signing) between Ministry of Public Administration and HUAZHONG University of Science and Technology, China. As a faculty, he facilitates knowledge in the areas of development informatics, knowledge management, public sector reform, knowledge innovation in the public sector. He has a number of publications published in peer reviewed journals.



Professor Dr. Syed Sarfaraj Hamid is a full time Professor of Law and Dean, Faculty of Law at Bangladesh University of Business and Technology. He is a legal researcher, writer and Advocate, Supreme Court of Bangladesh. He has about twenty-two years academic track in legal academia. He was former fulltime faculty member in some prominent private universities of Bangladesh. He worked as the Head of the Department in different prominent private universities. He is working as a subject expert of Bangladesh Accreditation Council (BAC), he is external subject expert member of different public and private universities. He is the reviewer of different law journals. He is the member of editorial board in some prominent journals too. Prof. Hamid is a prominent legal scholar, he has published 27 research articles in different reputed journals both in national and international. He has published four law books, which are very significant for the students of law, lawyers and judges. Prof. Hamid has keen interest in cyber and media law, family law, human rights, civil and criminal litigation and contract law. He is the pioneer instructor for Moot Court and Clinical Legal Education. Prof. Hamid has supervised so many law students both in undergraduate and graduate level in legal research. He has obtained his LL. B Hons. and LL.M both from University of Rajshahi. Later on he earned his PhD from Islamic University, Kushtia. Prof. Hamid attended so many conferences and workshops in Bangladesh and abroad. He has obtained so many awards for his outstanding performance and contributions. At present his research field is AI and ChatGPT and it's Legal Consequences.



Dr. Mohammad Kamrul Hasan is a seasoned academic and public sector professional with over two decades of experience spanning governance reform, policy analysis and development management. He is a Deputy Secretary to the Government of Bangladesh, currently working (on lien) as a Senior Tutor at the Global Development Institute (GDI), University of Manchester. His career reflects a blend of high-level policy formulation, civil service reform and international collaboration, notably through roles with UNDP and IFC. Dr. Hasan holds a PhD in Development Policy and Management from the University of Manchester and has authored numerous scholarly and policy publications on governance, refugee crisis management and innovation in public administration.

Appendix-1: Profiles of Speakers and Experts



Tanvir Bashar is a member of the 28th BCS (Administration) cadre and currently serves as Deputy Chief at the General Economics Division of Bangladesh Planning Commission. He has previously worked in the Economic Relations Division and the Finance Division. Bashar holds an Honours and a Masters degree in Economics from the University of Dhaka and a Masters in Policy Economics from Williams College, USA. He is currently pursuing a PhD in Economics at the Australian National University, with his thesis expected to be submitted by June 2025.



Dr. Sayla Sowat Siddiqui is working as an Assistant Professor of Finance at the BRAC Business School, BRAC University for last two and half years. She completed her PhD in Finance from Australian National University in 2022 with the university fellowship and Masters in Business Research from Queensland University of Technology in 2013 with Endeavour Award of Australian Government. Sayla is passionate in complex data analysis and research publications. She has demonstrated ability to teach and assess advanced finance courses and possesses valuable corporate industry experience in financial planning and forecasting. In addition, Sayla is highly passionate about public speaking. While pursuing PhD at the Australian National University, Sayla won the Three Minutes Thesis Presentation award (ANU) and the International Speech Competition of Canberra City Toastmasters Club.



G.M. Sharfaraz is a civil servant with fourteen years of extensive experience in field administration, having served in various capacities. He is presently undertaking his PhD at the GDI, University of Manchester, UK. His research aims to identify the nexus and gaps between organizational capacity building and crisis management in the public sector, with a specific focus on the healthcare sector's role in addressing the challenges posed by the Covid-19 pandemic.



Towfiqul Islam Khan is an Economist by training and currently a Senior Research Fellow at the Centre for Policy Dialogue (CPD), Bangladesh. In his professional career of about two decades, he has undertaken research and published in several areas, including macroeconomic policy, public finance management, financing for development, inclusive society, poverty and social protection. Khan is a member of the 'SDG Working Team' constituted under the Prime Minister's Office, Government of Bangladesh. He led the Research and Technical Support Team Support Team of the White Paper on the State of the Bangladesh Economy created by the present Interim Government of Bangladesh. Khan was previously a member of a number of technical committees set up by the Bangladesh government agencies, including the Bangladesh Bureau of Statistics (BBS), External Relations Division, Ministry of Commerce and NGO Affairs Bureau of Bangladesh. Khan received the Australian Leadership Award (ALA) in 2008.

Appendix-1: Profiles of Speakers and Experts



Azreen Karim is an applied development economist and currently working as a Senior Research Fellow at the Bangladesh Institute of Development Studies (BIDS), Dhaka, Bangladesh. Her current research interests include environmental, climate and disaster economics, international and development economics. Azreen's articles have appeared in international reputed journals, namely World Development, Journal of International Development, Natural Hazards, The Singapore Economic Review and Review of Economics and Institutions. She has contributed Book Chapters in the book(s) titled Economics of Natural Disasters (World Scientific Publishing), Global Pandemic and Human Security: Technology and Development Perspective (Springer Nature), Pandemics Risk, Response and Resilience (Elsevier) and Handbook on Climate Mobility (Edward Elgar Publishing). In 2015, she was awarded the prestigious Jan Whitwell Prize for best presentation of work undertaken by a doctoral student. She holds a Masters in Economics from York University, Toronto, Canada and a Ph.D. in Economics from Victoria University of Wellington, New Zealand. She has research collaborations with the United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), International Food Policy Research Institute (IFPRI), Chr. Michelsen Institute (CMI) Norway, World Bank Group, International Growth Centre (IGC), International Institute for Sustainable Development (IISD), International Centre for Trade and Sustainable Development (ICTSD), Sustainable Development Policy Institute (SDPI), Trade Knowledge Network (TKN) and Economic Research Institute for ASEAN and East Asia (ERIA). She has professional practice involvement with the American Economic Association (AEA), Western Economic Association International (WEAI), New Zealand Association of Economists (NZAE) and the Bangladesh Economic Association (BEA).



Mr. Mohammad Mamun is a sociologist and Senior Research Officer of Bangladesh Public Administration Training Centre (BPATC). He did his Bachelor & Master from Department of Sociology, University of Dhaka. He had also completed his 2nd Master on Public Policy from National Graduate Institute for Policy Studies (GRIPS), Japan under MEXT Scholarship. He has been working in BPATC since December 2011 which is the apex training institute in the public Sector mainly responsible for imparting training for the Civil Servant and also works as think tank of the Government. Mr. Mamun has worked various capacities in BPATC such as Assistant Director PPR (Planning, Programming & Recording), Logistic and Dormitory. He has also worked as Course Coordinator in 54 Foundation Training Course (FTC), P58th FTC, P60th FTC, P63rd FTC, 69th FTC, 70th FTC, 71st FTC, 75th FTC and 78th FTC which is mandatory for the newly recruited civil servants. Even, he worked as Course Coordinator of 134 and 146 Advanced Course on Administration and Development (ACAD) which is mandatory for the Deputy Secretary and their equivalent officials from Bangladesh Armed Forces Division. He had completed and attained different training in home and abroad such as Foundation Training Course, Training of Trainers Course, Conflict Management and Negotiation Technique Course, Research Methodology Course, Report Writing Training, Training of Trainers on Children's Issues (Home) and Strategic Leadership Training (Singapore), International Kaizen Convention (Japan), Institutional Integrity Management and Good Governance (Hong Kong). He has a good commend (Reading, Writing and Speaking) in Bangla, English and Hindi (Speaking only). For training purpose, he visited Japan, Sri Lanka, Thailand, Singapore and Hong Kong. He has also participated different National and International Seminar such as Symposium and Conference as Paper Presenter and Rapporteur. He

Appendix-1: Profiles of Speakers and Experts

has worked as Research Associate and Joint Research Project Director as many as 13 Research Projects. Mr. Mamun is also author of 02 (one) article and co-author of 08 (eight) articles. He is also a co-author of a Book Chapter Titled "Challenges of Artisanal Fishermen: A Case Study from Sonadia Island, Bangladesh" Mr. Mamun would love to work in Social Research especially in the area of Gender Development, Training & Development. His areas of interest are Research, Managing the Training, Event Management, Networking and Communication. He has different experience on various extra curriculum activities such as Debate, Badhon (Voluntary Blood Donate and Collection Organization) and BNCC (Naval Wing).



Md. Emtiazul Hassan Mazumder is a Public-Private Partnership (PPP) Specialist with over 12 years of experience in infrastructure development and financing. Currently serving at the PPP Authority in Bangladesh, he has led key initiatives in project structuring, risk analysis and stakeholder engagement across sectors. A Certified PPP Professional (CP3P), Emtiaz has been instrumental in advancing major projects such as the Dhaka Elevated Expressway, Dhaka Bypass road, O&M of Hazrat Shahjalal International Airport, Purbachal Water Supply and Patenga Container Terminal. He holds a Master of Development Studies from BRAC University and a BBA from IBA, Jahangirnagar University.



Samanta Islam is an undergraduate Economics student at BRAC University with a strong interest in research, education and social equity. She currently works as a Student Tutor at BRAC Business School and teacher at Brainiac Lab. She previously served as a Campus Ambassador for Teach For Bangladesh, where she supported youth-led initiatives in education reform. She also has experience in working as content writer for ShobThik, an organization that contributes to mental health awareness and advocacy. Her academic focus lies in the areas of gender equity, international trade and economic development, with a growing passion for data analysis. Samanta is particularly drawn to research that bridges theory and practice to inform inclusive and evidence-based policy.

Conference Secretariat

The Secretariat for the 1st Development Dialogue included staff from NADA's Publications Wing, Training Management and Administration. Key personnel ensured smooth logistics, communication with presenters and discussants and publication of the Book of Abstracts.

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Deputy Director (Publications), NADA.

1st Day: 31st May 2025, Saturday

09:00-10:30 : Opening Session

- 9:00-09:05 : Recitation from Holy Books
- 09:05-09:10 : Welcome Address by **Dr. A.B.M. Mahbub Alam**, (Additional Secretary), Member Directing Staff (MDS), (Administration), NADA
- 09:10-09:20 : Address by the Special Guest **Mr. A.N.M. Moinul Islam**, Additional Secretary, Career Planning & Training Wing, Ministry of Public Administration
- 09:20-09:30 : Address by the Chief Guest **Mr. Iqbal Abdullah Harun**, Secretary, Planning Division
- 09:30-09:40 : Address by the Chairperson **Dr. Md. Shahidullah**, Rector (Secretary), National Academy for Development Administration (NADA)
- 09:40-10:30 : Keynote Presentation on theme **“Accelerating Inclusive Development Through Effective Development Administration for a Prosperous Bangladesh.”** by Professor **Dr. Niaz Ahmed Khan**, Vice Chancellor, University of Dhaka

10:30-11:00 : Refreshments

11:00-1:15 : Seminar Session

- 11:00-11:05 : Introductory Speech by **Dr. A.B.M. Mahbub Alam** (Additional Secretary), Member Directing Staff (MDS)- (Administration), NADA
- 11:05-11:45 : **Paper Presentation: Do Public-Private Partnerships (PPPs) Catalyze Inclusive Growth in Bangladesh?**
Najmus Sayadat, PhD, Joint Secretary and Member (Finance), Bangladesh Rural Electrification Board and **Mr. Md. Emtiazul Hassan Mazumder**, Consultant, PPP Authority
 Open Forum Discussion led by **Mr. Md. Hafizur Rahman**, (Retd. Additional Secretary), Administrator, FBCCI
- 11:45-12:25 : **Paper Presentation: How Much Gender Income Inequality Accrues Due To Climate-induced Migration? New Evidence from Bangladesh**
Dr. Azreen Karim, Senior Research Fellow, Bangladesh Institute of Development Studies
 Open Forum Discussion led by **Mr. Towfiqul Islam Khan**, Senior Research Fellow, Centre for Policy Dialogue (CPD)
- 12:25-01:10 : **Paper Presentation: From Crisis to Coordination: Examining Organisational Performance of Healthcare System to Tackle Covid-19 Pandemic in Bangladesh**
Mr. G. M. Sharfaraz (Senior Assistant Secretary), PhD Candidate, University of Manchester, UK
 Open Forum Discussion led by Professor **Dr. Syed Sharfaraz Hamid**, Dean, Faculty of Law, Bangladesh University of Business and Technology (BUBT)
- 01:10-01:15 : Closing remarks by **Dr. A.B.M. Mahbub Alam** (Additional Secretary), Member Directing Staff (MDS)- (Administration), NADA

2nd Day: 1st June 2025, Sunday

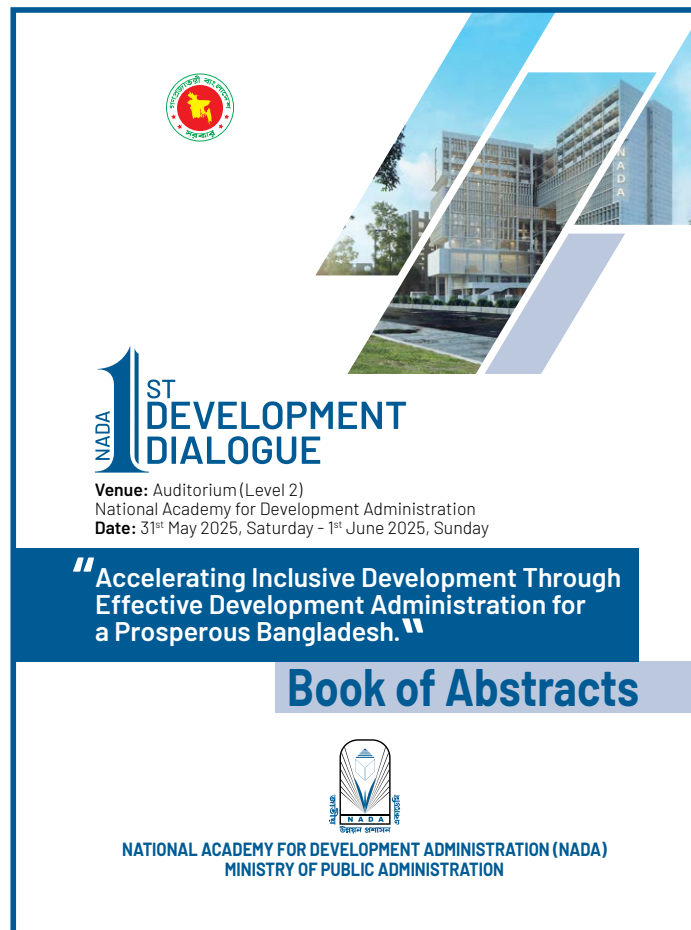
9:00-11:00 : Seminar Session	
09:00-09:05	Introductory Address by Ms. Kazi Hosna Ara (Joint Secretary), Member Directing Staff (MDS)- (Research, Publication and International Liaison), NADA
09:05-09:45	<p>Paper Presentation: The impact of social protection programs on the household savings behavior in Bangladesh</p> <p>Ms. Sayla Sowat Siddiqui, PhD, Assistant Professor, BRAC Business School, BRAC University and Mr. Tanvir Bashar, Deputy Chief, General Economics Division, Bangladesh Planning Commission</p> <p>Open Forum Discussion led by Ms. Murshida Sharmin, Joint Secretary, Civil Registration and Social Security Branch, Cabinet Division.</p>
09:45-10:25	<p>Paper Presentation: The Role of Artificial Intelligence and Big Data in Modern Development Administration</p> <p>Mr. Mohammad Mamun, Senior Research Officer, Bangladesh Public Administration Training Centre (BPATC)</p> <p>Open Forum Discussion led by Professor Dr. A.B.M. Shawkat Ali, Vice Chancellor, Bangladesh University of Business and Technology (BUBT)</p>
10:25-11:05	<p>Paper Presentation: Aspiration for Job Role: A Motivational Perspective from Bangladesh Civil Service</p> <p>Dr. Mohammad Kamrul Hasan, Deputy Secretary, Ministry of Public Administration and Senior Tutor, University of Manchester, UK</p> <p>Open Forum Discussion led by Dr. Md. Jahid Hossain Panir, Member Directing Staff (MDS), Bangladesh Public Administration Training Centre (BPATC)</p>
11:05-11:10	Closing remarks by Ms. Kazi Hosna Ara (Joint Secretary), Member Directing Staff (MDS)- (Research, Publication and International Liaison), NADA
11:10-11:30 : Refreshments	
11:30-01:00 : Closing Session	
11:30-11:40	Summary and Highlights by Ms. Kazi Hosna Ara (Joint Secretary), Member Directing Staff (MDS)- (Research, Publication and International Liaison), NADA
11:40-11:50	Address by the Special Guest Mr. Muhammed Ali Armağan , Country Coordinator, Turkish Cooperation and Coordination Agency (TIKA)
11:50-12:00	Certificate Distribution
12:00-12:10	Address by the Chief Guest Mr. Md. Rezaul Maksud Jahedi , Secretary, Local Government Division
12:10-12:20	Address by the Chairperson Dr. Md. Shahidullah , Rector (Secretary), National Academy for Development Administration (NADA)
12:20-12:30	Vote of thanks by Dr. A.B.M. Mahbub Alam , (Additional Secretary), Member Directing Staff (MDS), Administration, NADA

Publications

Book of Abstracts:

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