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Message from Chief Patron

Knowledge is the cornerstone of any lasting transformation, and research is its most powerful instrument. At City University, we believe that a thriving academic institution is measured not only by its teaching excellence but also by its contribution to the advancement of knowledge.

With immense pride, I welcome the publication of the seventh volume of the City University Journal (CUJ), July 2024—a reflection of our enduring commitment to fostering a culture of critical inquiry, intellectual rigor, and scholarly integrity.

Each article in this edition signifies more than academic contribution—it is a mark of our faculty and researchers' resolve to question, to explore, and to contribute meaningfully to the world of ideas. This journal is a space where emerging and established scholars meet in dialogue, shaping discourses that extend far beyond the walls of the university.

I express my heartfelt appreciation to the Editorial Board, reviewers, and all contributors who have invested their intellect and time into this volume. Their dedication ensures that CUJ continues to be a respected academic platform that resonates with relevance and excellence.

As a Co-Founder and Co-Chairman of City University, it brings me great satisfaction to witness the evolution of this journal. I am confident that CUJ will continue to inspire a generation of thinkers, educators, and changemakers—rooted in ethics, driven by knowledge, and committed to the greater good.

Mrs. Golam Fatima Tahera Khanam

Co-Founder and

Co- Chairman, Board of Trustees

City University

Message from Patron

In an age where ideas shape destinies and inquiry defines progress, the publication of the seventh volume of the City University Journal (CUJ), July 2024 stands as a proud testament to our university's unwavering commitment to cultivating a thoughtful and research-driven academic culture.

This edition showcases a vibrant tapestry of scholarship—articles that not only probe critical issues across disciplines like Humanities, Science, Engineering, and Business, but also reflect the evolving spirit of academic collaboration. Authored by our own dedicated faculty and distinguished scholars from beyond our campus, the journal embodies a shared pursuit of knowledge that transcends boundaries.

The making of this volume has been a collective journey. I sincerely acknowledge the perseverance of our contributors, the discernment of our reviewers, and the diligence of the Editorial Board. Their combined efforts have ensured a publication that is as rigorous as it is relevant.

Let this journal not simply be read but engaged with. Let it challenge assumptions, inspire inquiry, and invite new voices into the conversation. I look forward to seeing City University Journal continue to grow as a trusted source of scholarly thought and a beacon for future researchers.

Warm regards,

Brig Gen (Retd) Prof Dr. Engr. Md. Lutfor Rahman
Vice-Chancellor
City University

Note From the Editor-in-Chief

It is with great pleasure that we present the seventh volume of the City University Journal (CUJ), July 2024. This issue brings together a diverse and insightful collection of ten scholarly articles, contributed by faculty members of City University alongside esteemed researchers from other academic institutions. Each article reflects a deep commitment to academic excellence and demonstrates expertise in the respective fields of Arts, Social Sciences, Science and Engineering, and Business Administration.

We extend our heartfelt gratitude to all contributors and reviewers whose dedicated efforts have enriched this volume. Their rigorous scholarship and commitment to a knowledge-based approach have significantly strengthened the quality and relevance of the research presented.

We are especially grateful to the members of the Editorial Board and our external reviewers for their valuable time, thoughtful critiques, and unwavering support throughout the editorial process.

As we move forward, we remain optimistic that City University Journal will continue to serve as a dynamic platform for intellectual exchange. We hope this publication will inspire greater participation from research scholars, university faculty, and members of civil society—just as it has in previous years.

Professor Dr. Kazi Shahdat Kabir

Editor-in-Chief

City University Journal

City University, Dhaka, Bangladesh

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Solar Energy Generation and IOT Based Monitoring System for Proper Energy Management

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Abstract: As internet usage rises, the phrase "Internet of Things" is coined to describe a scenario in which every day usable objects are integrated with the internet to enable interactions with the real world. The Internet of Things (IOT) makes it simple to manage items and senses parameters in networks and systems that are already in place. It also generates a lot of jobs and career opportunities in the technology sector. This technological advancement lessens the workload for humans while increasing the efficiency, accuracy, and financial benefits of current systems. Numerous uses for this technology exist, including smart villages, solar-powered cities, solar-powered lighting, and industrial uses. Given that there is a growing emphasis on renewable energy sources, this suggested system will offer an online display of the power use of solar energy's power consumption. By enabling us to examine the energy consumption, the nodeMCU will be extremely helpful in our application and help us to solve our electricity problems by sending its various parameters to the internet server that will be accessed by concerned authority.

Keywords: Internet, IOT, Energy, environment friendly energy generation, Bangladesh, Technology implementation, Solar energy

I. INTRODUCTION

The Internet of Things, or IoT, has completely changed how we use technology and created new opportunities for innovation across a range of industries. The production and delivery of clean energy is one such area. Renewable energy sources are in high demand due to the rise in global warming and the need to minimise carbon emissions.

Solar energy is one of the most promising renewable energy sources among them. The utilisation of solar energy has increased recently, and it is now a more sensible

and cost-effective substitute for conventional energy sources. However, a number of variables, such as weather and maintenance concerns, can have an impact on the effectiveness and dependability of solar energy systems.

Energy generation, storage, and maintenance are just a few of the system's functions that may be watched over and managed. IoT-based solar energy systems have the ability to detect possible maintenance issues before they become serious issues and to offer real-time data on energy output and consumption. In this situation, a solar energy system powered by the Internet of Things can also be used as a backup energy source for homes and businesses.

IoT-based solar energy systems can help lower carbon emissions and rely less on conventional energy sources by producing clean, dependable, and affordable electricity with the correct configuration. All things considered, the way we produce and use energy might be completely changed by an Internet of Things (IoT)-based solar energy collection and monitoring system, making it more dependable, sustainable, and efficient.

In terms of efficiency and cost reductions, IoT-based solar energy collection and monitoring systems can also provide a number of advantages. For example, real-time performance monitoring and optimisation of solar panels can be achieved by the integration of sensors. This can assist in locating problems like shading or broken panels, enabling prompt fixes that can help to optimise the energy output of the system. Batteries and other energy storage devices can be integrated with Internet of Things-based solar energy systems. This can guarantee that energy is available even when the sun isn't shining and help to lessen dependency on the power system. It is feasible to store extra energy produced during the day and use it at night or during periods of high demand by employing energy storage devices. Furthermore, by optimizing energy utilization within a building or residence, IoT-based solar energy systems can also aid in lowering overall energy consumption. Smart home devices, for instance, can be incorporated into the system to provide automated lighting and appliance management based on energy supply and demand. By lowering overall energy usage, this can improve the solar energy system's efficiency even more. In conclusion, there are a number of advantages to IoT-based solar energy collection and monitoring systems, such as lower costs, higher efficiency, and sustainability. We may anticipate seeing a rise in the number of residences, companies, and neighborhoods using Internet of Things (IoT)-based solar energy systems as a dependable and clean substitute for conventional energy sources as technology develops and becomes more widely available.

The ability to remotely monitor and control IoT-based solar energy systems offers increased flexibility and control, which is another important benefit. Users can use a computer or mobile device to get real-time data on the operation of their solar energy system from anywhere in the globe by utilising cloud-based software. Businesses and

organisations with many locations may find this especially helpful as it allows them to centrally monitor and control their energy expenses and usage.

Additionally, IoT-based solar energy systems can lessen the overall impact of energy generation on the environment. Conventional energy sources, including fossil fuels, can contribute to greenhouse gas emissions, water and air pollution, and other environmental problems. Solar energy, on the other hand, is a clean, renewable energy source that emits no pollutants or emissions. We can lessen our need on conventional energy sources and contribute to a more sustainable future by utilizing IoT-based solar energy solutions. Lastly, the renewable energy industry may see an increase in employment prospects because to IoT-based solar energy systems. Professionals with the necessary skills to install, maintain, and run solar energy systems are in high demand as the need for renewable energy sources grows. We can finance the development of a more sustainable economy and contribute to job creation by making investments in Internet of Things-based solar energy systems.

To sum up, there are several benefits to IoT-based solar energy collection and monitoring systems, such as lower costs, more efficiency, sustainability, and flexibility. Technology has the potential to become more and more significant in our shift to a cleaner, more sustainable energy future as it develops and becomes more widely available.

II. PRESENT STATE OF SOLAR ENERGY GENERATION AND MONITORING

The Internet of Things (IoT) is a quickly expanding network of linked gadgets that offers a variety of cutting-edge uses. Utilising IoT for solar energy gathering is one such use; solar energy is a highly advantageous alternative energy source. Solar energy has grown in popularity as a result of the worldwide movement towards sustainable energy sources since it is abundant, easily accessible, and reasonably priced. Still, there are drawbacks to solar energy harvesting, namely its cyclical nature and dependence on the weather. By addressing these issues, IoT-enabled solar energy monitoring and collection systems can increase overall system efficacy and efficiency. Weather, energy usage, and energy production may all be tracked and recorded by IoT-based solar energy systems.

permitting real-time modifications to maximize the gathering and usage of energy. In order to avoid system breakdowns, this monitoring system may also spot possible problems and offer predictive maintenance. IoT can also make it possible to access and control solar energy installations remotely, which will simplify management and maintenance from any location. IoT-based solar energy gathering and monitoring systems have many potential advantages, such as lower energy prices, higher energy efficiency, and less environmental effect.

As a result, there is an increasing interest in the study and creation of Internet of Things (IoT)-based solar energy systems, with several global projects and initiatives now under way. As part of its objective to promote alternative energy sources, IDCOL finances projects and programmes that

utilize a variety of renewable resources. By offering beginning subsidies, concessionary loans, and support for capacity growth, IDCOL helps the government meet its targets of generating 5% of the country's electricity from renewable sources by 2015 and 10% of the nation's electricity from renewable sources by 2021. With an emphasis on commercialization, IDCOL's goal is to guarantee the industry's long-term financial and economic viability [1]. Everywhere in the world has access to solar energy, which can lessen need on imported energy.

Existing Project	Project Features				
	Voltage Meter	Current meter	Power Meter	Budget	Mobile Apps
IoT-Based Monitoring and Control System for Solar Energy	YES	YES	NO	HIGH	NO
IoT-Based Solar Energy Monitoring and Control System	YES	YES	NO	HIGH	YES
IoT-Based Solar Energy Monitoring System using Arduino	NO	NO	NO	HIGH	NO
IoT-Based Solar Power Monitoring and Management System	YES	YES	NO	HIGH	NO
Design of an IoT-Based Solar Panel Monitoring and Control System	YES	YES	NO	HIGH	NO
Current System	YES	YES	YES	LOW	YES

P. Jayalakshmi and P. Santhosh Kumar's "IoT-Based Monitoring and Control System for Solar Energy" (2019): An Internet of Things-based system for tracking and managing solar energy is proposed in this research. The system is made up of sensors that measure several solar panel properties and a microprocessor that processes the data. Users of the system can also monitor and manage the solar panel through a smartphone application. [2]

M. U. Hassan, M. S. Uddin, and M. A. Haque's "IoT-Based Solar Energy Monitoring and Control System" (2018): In this research, an Internet of Things (IoT)-based solar energy monitoring and control system is proposed. A microcontroller is used to process the data and sensors are used to measure various solar panel properties. A mobile application for monitoring and control is also included with the system. [3]

S. B. Awate, A. R. Dhobale, and S. B. Gadakh's "IoT-Based Solar Energy Monitoring System using Arduino" (2019): This paper describes an Arduino-powered Internet of Things solar energy monitoring system. The system consists of sensors to detect several solar panel properties, an Arduino to interpret the data, and a mobile application to monitor and control the system. [4]

Dhamak and Patil (2018) present "IoT-Based Solar Power Monitoring and Management System": An IoT-based system for tracking and controlling solar power is proposed in this research. The solar panel's numerous properties are measured by

the system using sensors, and the data is processed by a microprocessor. A web application is also included in the system for control and monitoring purposes. [5]

Sahu, Mishra, and Patnaik (2020) "Design of an IoT-Based Solar Panel Monitoring and Control System": This study proposes an Internet of Things (IoT)-based solar panel monitoring and control system that processes data using a microcontroller and measures various solar panel properties using sensors. A mobile application for monitoring and control is also included with the system. [6]

III. PROPOSED METHODOLOGY

Creating and implementing sensors to gather information on energy production, consumption, and storage is part of the process for an Internet of Things (IoT)-based solar energy gathering and monitoring system. For analysis and optimization—which can involve machine learning algorithms, modelling, and simulation—this data is sent to a cloud-based platform. After then, the system is monitored and controlled to maximise energy efficiency and minimise expenses. Real-time energy performance monitoring is facilitated by tools for reporting and visualisation. The hardware and sensor components need to be regularly calibrated and maintained, and integration with other systems can boost productivity. Lastly, a cost-benefit analysis that takes into account the expenses of installation, upkeep, and operation as well as possible energy savings should be carried out to assess the system's viability from an economic standpoint. benefits to the environment and financial savings. The methodology needs to take security precautions into account to guard against hacker attacks and illegal data access.

A. System Architecture

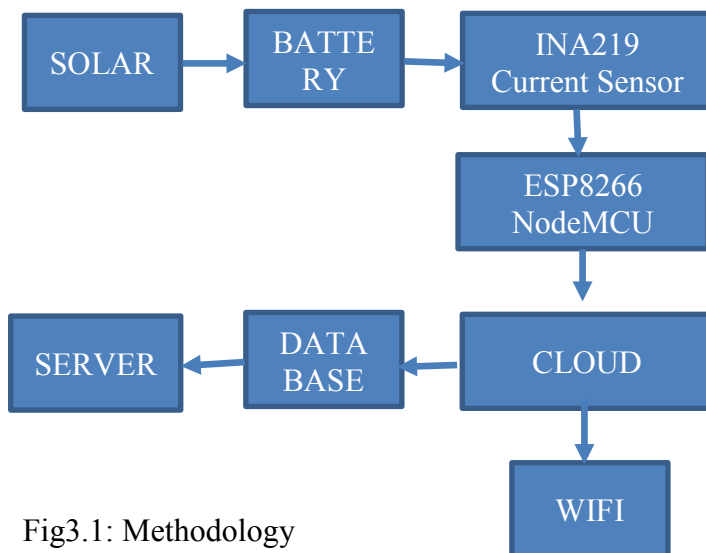
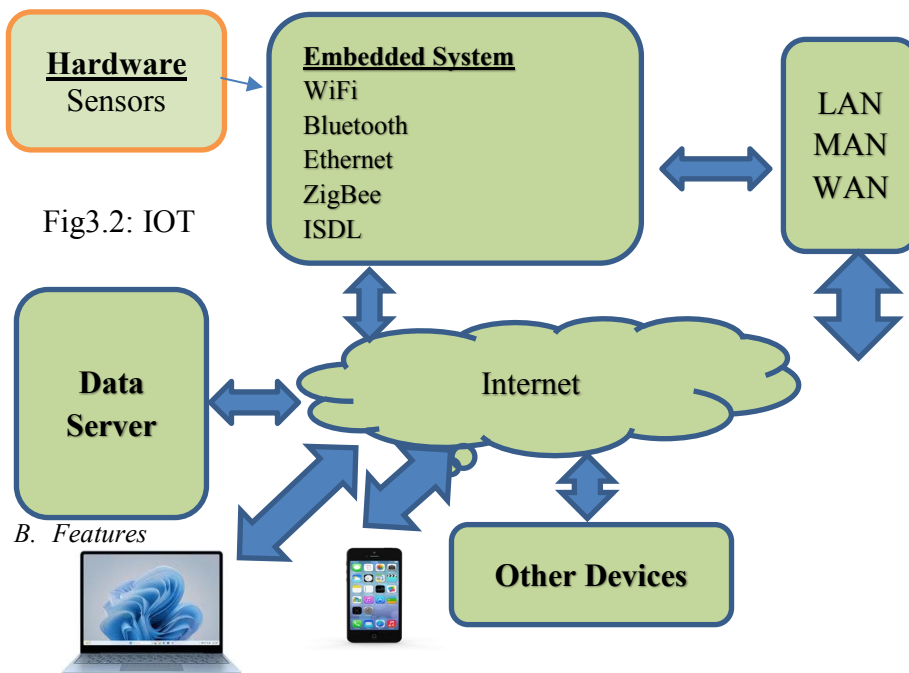


Fig3.1: Methodology

Hardware	Software
ESP8266 NodeMCU	Arduino IDE, C/C++, Blynk Apps
1.3" IIC OLED Display	
INA219 Current Sensor	
Solar Panel	
Battery	
DC-DC Buck Converter Step Down Module	
DC Fan	
DC LED Bulb	
PCB Prototyping Board	
Cable	
Android Smart Phone	
PC	

Table. 3.1 Required component and Software

The concept describes a novel Internet of Things (IoT)-based solar power monitoring system. This method uses solar cells, which are mounted in solar panels and convert sunlight into energy. One NodeMCU is part of our fleet. Current voltage characteristics are tracked with the use of sensors. The voltage and current readings are identical. This displays everything that is visible on the OLED display. An IoT device can always access a parameter's display on the screen through the sensors it is connected to, allowing the user to monitor its value from any network. The main objective of this research is to determine the best power output to be obtained while dust accumulates on the solar panels. It's also important to remember that the system will stop functioning if there is a problem with the solar panels.



The ways in which we produce and consume energy could be completely transformed by IoT. Systems for gathering and monitoring solar energy are one area where IoT can have a significant influence. An Internet of Things-based system for gathering and tracking solar energy has the following features:

1. Solar Panel Monitoring: You can use Internet of Things (IoT) devices to track each solar panel's performance inside a solar array. This can assist in locating any problems with certain panels that might impair the system's overall effectiveness.

2. Monitoring of Energy Storage: Batteries and other energy storage systems can have their status checked with IoT devices. With the use of this data, battery charging and discharging can be optimised to lengthen battery life.

3. Real-time Performance Monitoring: Data may be gathered from different solar energy system components and real-time performance monitoring can be accomplished with the help of IoT. It is possible to use this data to spot problems before they get out of hand.

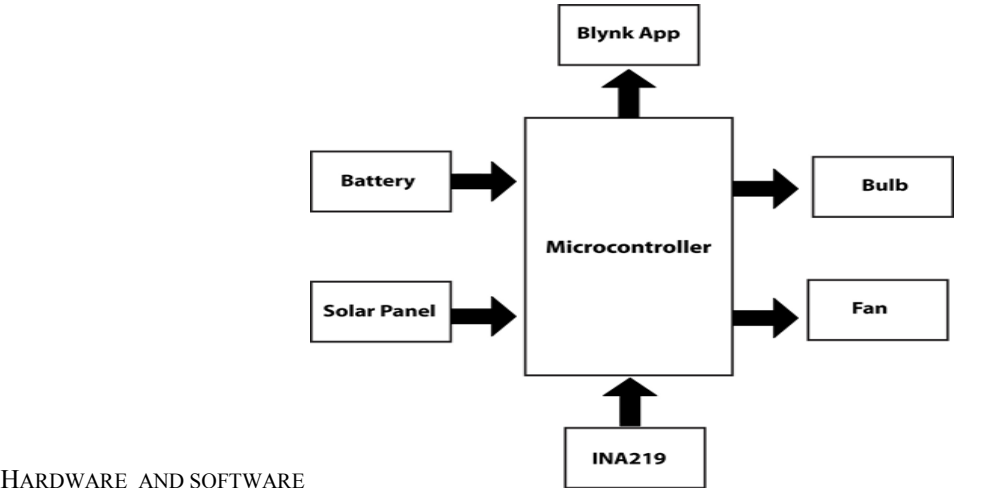
4. Remote Monitoring: Remote management and maintenance are possible thanks to the system's ability to be observed remotely via the internet.

5. Predictive Maintenance: It is possible to forecast when maintenance is necessary by using the data that IoT devices collect. By doing this, you may prolong the solar energy system's lifespan and cut down on downtime.

6. Energy Management: Building energy usage may be optimised with the help of IoT. Energy costs can be decreased and locations where energy can be conserved can be found by keeping an eye on energy usage.

7. Energy Analytics: Information about the solar energy system's performance can be obtained by examining the data gathered by Internet of Things devices. This can assist in pinpointing problem areas and maximizing system efficiency.

8. Energy Trading: When there is excess generation, an Internet of Things (IoT)-based solar energy system can be linked to a virtual power plant or a local energy market to trade energy.



HARDWARE AND SOFTWARE

Fig4.1: Block diagram

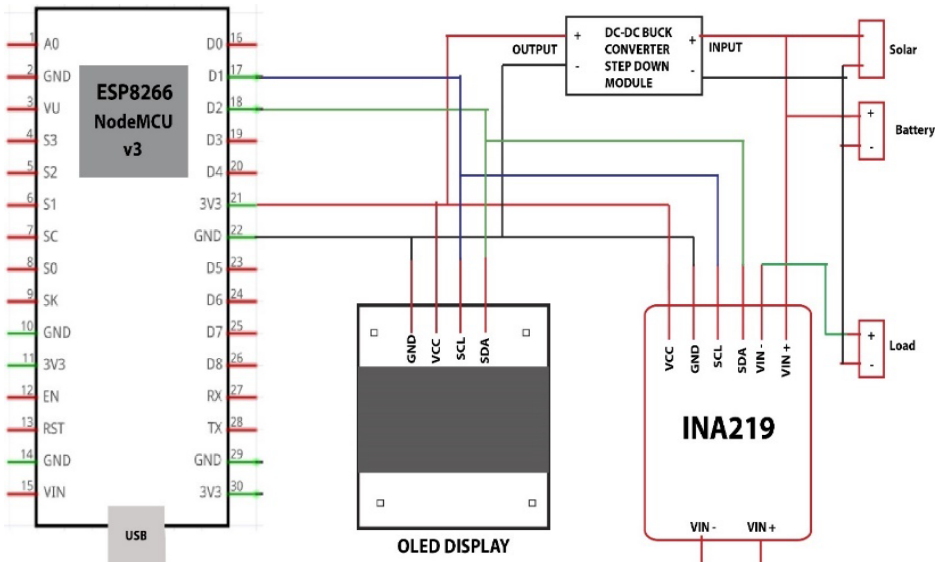


Fig4.2: Circuit diagram

A. Hardware:

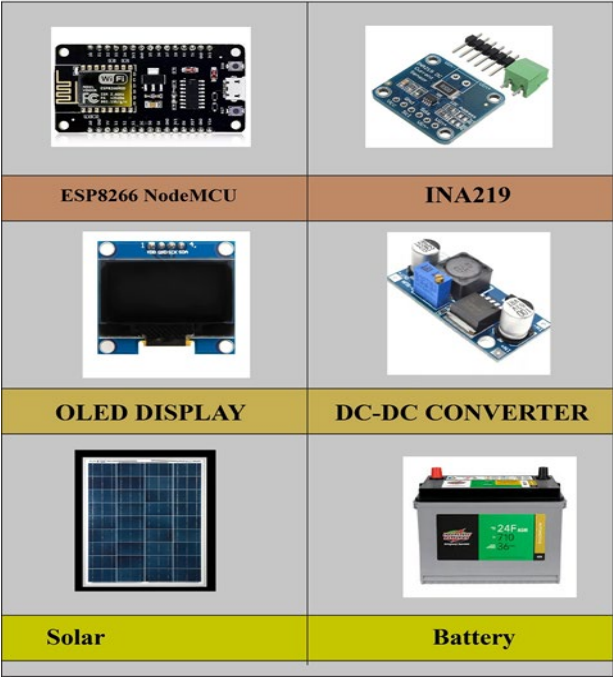


Fig4.3: HARDWARE

i. NodeMCU :

A well-liked and reasonably priced development board, the ESP8266 NodeMCU is built around the ESP8266 microprocessor, a low-cost Wi-Fi microchip. With many GPIO pins for attaching sensors and other peripherals, as well as an integrated USB interface for programming and power supply, the NodeMCU board streamlines the process of creating and prototyping Internet of Things applications. It may be programmed by enthusiasts and developers of all skill levels using the Lua programming language or the Arduino IDE. The NodeMCU board is suitable with a variety of IoT platforms and devices since it supports a wide range of communication protocols, such as Wi-Fi, TCP/IP, and MQTT. Furthermore, the board is a versatile and adaptable platform for IoT application development and prototyping due to its open-source design and small form factor. Because of its affordability, user-friendliness, and adaptability, the NodeMCU board has gained popularity for a variety of Internet of Things applications, including wireless sensor networks, home automation, and environmental monitoring.

ii. INA219 Current Sensor:

A very powerful and adaptable current sensor, the INA219 measures voltage, current, power, and energy cost in a circuit precisely. It is intended to detect the voltage drop across a shunt resistor, which enables it to accurately determine the current flowing

through the circuit. The sensor can be used in a variety of applications because it can measure currents, both positive and negative, up to $\pm 3.2\text{A}$. With a resolution of 0.1mA and an accuracy of 0.5% , the INA219's great accuracy is one of its main features. This makes it perfect for uses in robotics, motor control, battery management systems, and other fields where accurate current measurements are essential. With a customizable conversion time that enables customers to modify the measurement speed to optimize for accuracy or power consumption, the INA219 is also incredibly flexible. The sensor can also be used in a wide range of circuits because it is compatible with voltage levels between 0 and 26 volts. The INA219 provides useful data for power management and energy monitoring applications by calculating the power spent by the circuit it is monitoring using the voltage and current readings. In systems where energy consumption is a crucial factor, the sensor's ability to compute the circuit's energy cost enables more effective energy management. All things considered, the INA219 is an extremely competent and adaptable current sensor that offers precise readings of voltage, current, power, and energy cost in a circuit. Bi-directional current sensing, built-in protection features, and high accuracy make it a great option for a variety of applications.

iii. Solar Panel:

An apparatus that turns sunlight into electricity is a solar panel. It is constructed from a number of solar cells together to create a bigger module. Direct current (DC) power is produced by electrons flowing through solar cells when sunlight strikes them. An inverter is then used to transform this DC electricity into alternating current (AC), which can be fed into the electrical grid or used to power electrical equipment. An rising number of residential and commercial buildings, as well as isolated areas and space exploration, are using solar panels, a clean and renewable energy source.

iv. Battery :

The device that stores energy produced by solar panels for later use is called a battery, sometimes referred to as a solar energy storage system or solar battery bank. It is usually attached to a solar panel array and comprises a battery bank, charge controller, and inverter. During the day, the solar panels provide electricity that is utilised to charge the battery bank. Then, during times of low or no sunlight, the stored energy can be used to power buildings, commercial spaces, or other gadgets. As a means of lowering carbon emissions and dependency on conventional energy sources, solar batteries are growing in popularity.

v. DC-DC Buck Converter

Utilised in numerous electrical applications, the LM2596 DC-DC Buck Converter Step-Down Module is a well-liked and adaptable voltage regulator module. It has the ability to transform inputs with higher voltages (3V to 40V) into outputs

with lower voltages (1.5V to 35V). It has a high efficiency of up to 92% and an integrated potentiometer for adjusting the output voltage. The module has thermal shutdown, overcurrent protection, and other safety features. Its performance and adaptability have made it popular in robots, DIY electronics, and even automotive applications. Both experts and enthusiasts find it to be an appealing option due to its affordable price and small size.

B. Software:

i. Arduino IDE :

Code can be written and uploaded to Arduino boards and NodeMCU devices using the open-source Arduino Integrated Development Environment (IDE). With the help of the IDE's code editor, which has capabilities like auto-complete, syntax highlighting, and error detection, users can easily write, test, and debug code for Arduino boards. Additionally, the IDE comes with a serial monitor that enables real-time code debugging, data viewing, and board communication. The Arduino IDE works with a variety of operating systems, including Windows, Mac, and Linux, and it supports a number of programming languages, including C and C++. When it comes to designing and programming microcontroller-based projects, professionals, students, and hobbyists all like the Arduino IDE. Popular programming languages C and C++ are used to create a variety of applications, such as embedded systems, video games, and operating systems. Low-level programming languages like C are quick and effective because they offer direct access to memory and system resources. NodeMCU can be easily programmed in C or C++ using the Arduino IDE.

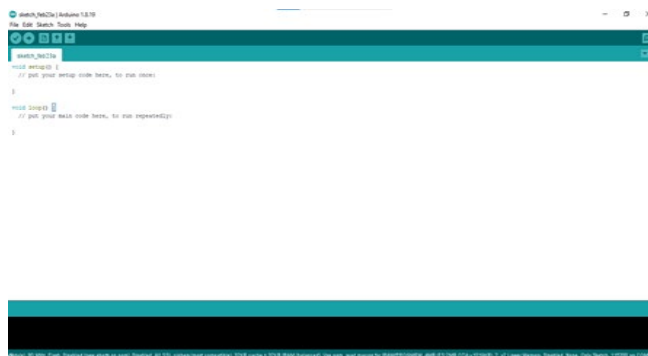


Fig4.4: ARDUINO IDE

ii. Web Application Design:

With the Blynk platform, users may create unique Internet of Things (IoT) apps that can be used via a web interface or a mobile app to control hardware and other devices. A cloud-based server, a mobile application, and a library of software components for several hardware platforms make up the Blynk platform. Although Blynk was first created for mobile devices, they have since launched Blynk Web

Dashboard, an online version of their platform. Without using a mobile device, users may design and administer IoT applications using Blynk Web Dashboard directly from a web browser. Similar features to the mobile app version are available in Blynk Web Dashboard, such as the capacity to connect to a variety of hardware devices, add widgets and controls, and design unique interfaces.

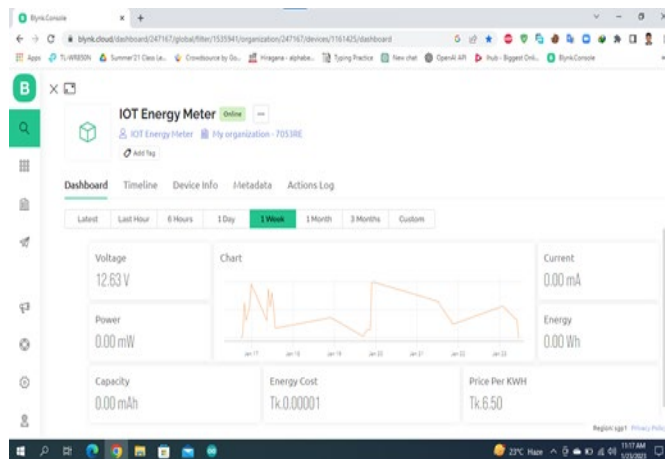


Fig4.5: Web Application Design

iii. *Mobile phone app design:*

Mobile phone apps for this application design with Blynk which provides unique interfaces, add widgets and controls, and monitor and manage Internet of Things devices. The application provides a large selection of pre-built widgets that can be readily customised to work with different types of hardware, such as buttons, sliders, graphs, displays, and more. Additionally, users have the ability to customise alerts and notifications depending on information gathered from their devices. They can programme alerts to notify them, for instance, when a specific threshold is reached, as when the temperature in a room rises over it. Furthermore, the Blynk mobile app gives users access to a community of enthusiasts and developers who exchange ideas and projects with one another. Users can cooperate and learn from one another because to this.

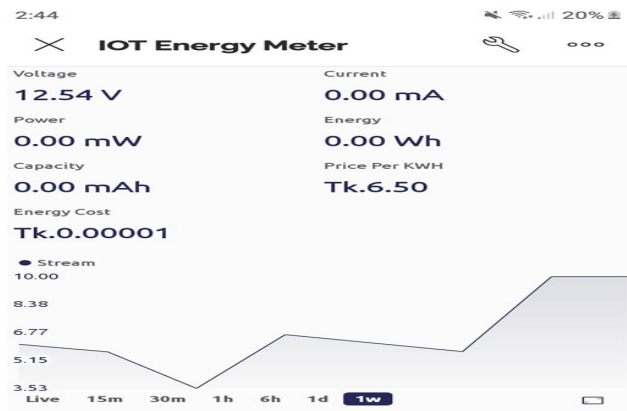


Fig4.6: Mobile phone app design

iv. Activity Diagram

Activity Diagram shows program flow:-

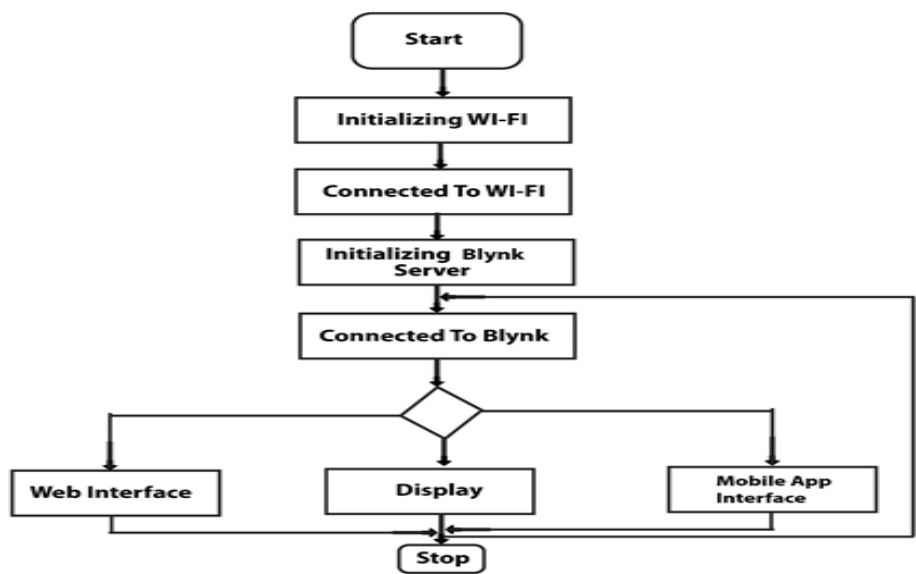


Fig4.7: Activity Diagram

v. Use Case Diagram:

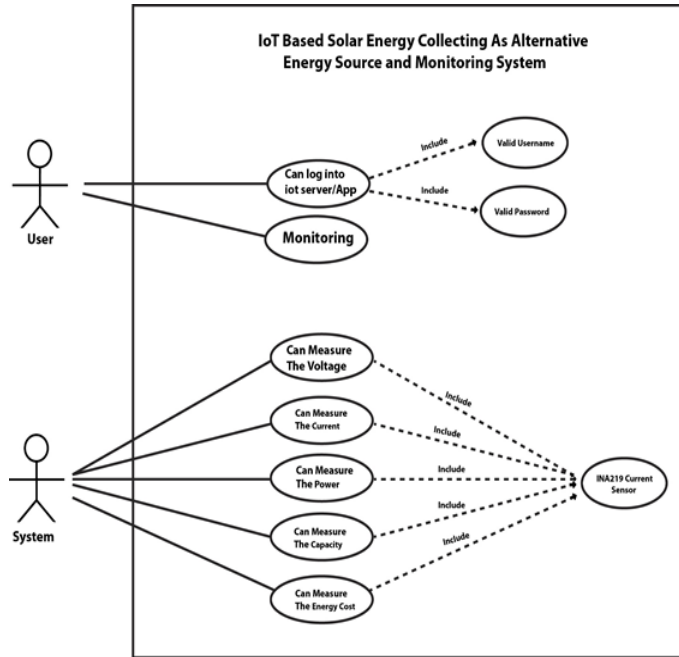


Fig4.8: Use Case Diagram

IV. RESULT

The results of our system can be viewed via the mobile device as well as the integrated OLED display on the entire system. An original mobile application is made. In the end, it retrieves data from the cloud and displays real-time data that generates outputs for the user.

The working model of the suggested system is shown in Fig. 5.1 Through the use of IoT technology, the system seeks to maximise the output power from the solar panels. Following solar panel installation, light energy is used to generate voltage and current. Parameters are recorded using sensors. Voltage enables us to If you observe how the panel operates, you might be able to identify the problem.

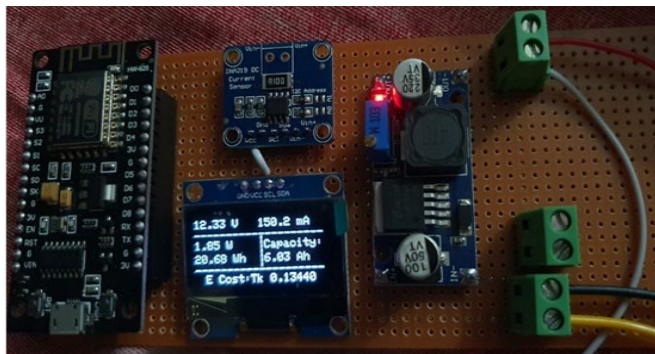


Fig. 5.1

Voltage enables us to If you observe how the panel operates, you might be able to identify the problem before anything goes wrong. Many advantages are anticipated from the system, such as a lessened need on non-renewable energy sources, financial savings, and a more sustainable pattern of energy use. The monitoring system's real-time data on energy production and consumption may be utilised to optimise energy use and cut waste, which will save money and create a more sustainable pattern of energy use. Furthermore, customers will be able to remotely access energy production data and operate the system from any location thanks to the Internet of Things-based live streaming capability, which will facilitate effective energy management and control from far-off places.

Web Application Result

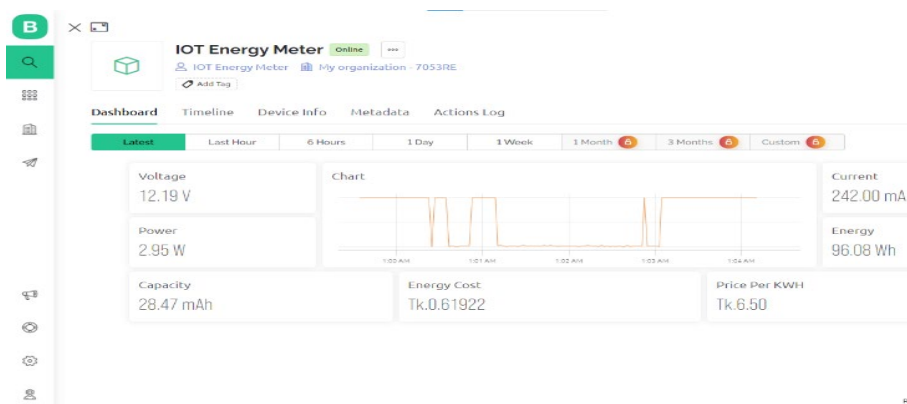
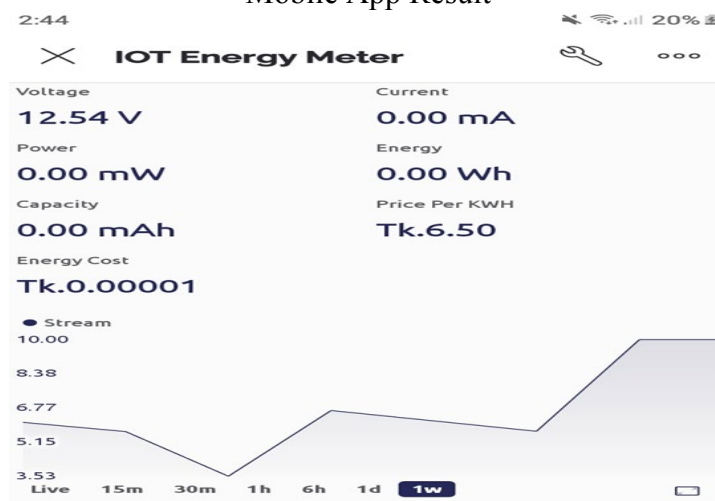


Fig. 5.2
Mobile App Result



V. DISCUSSION ON FINDINGS

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The energy industry stands to gain greatly from the deployment of Internet of Things (IoT) based solar energy gathering and monitoring devices. It offers a sustainable and alternate energy source that can lessen reliance on conventional fossil fuels. Furthermore, real-time monitoring and optimisation of the energy gathering process are made possible by the use of IoT technology, which lowers costs and boosts efficiency. The capacity of Internet of Things-based solar energy systems to gather and process data is one of its main benefits. This makes it possible to optimise the gathering of energy by varying factors like the battery's capacity and the panels' angle. Additionally, the system's ability to identify anomalies or flaws allows for prompt maintenance and repair. The fact that these can be scaled is another benefit. Additionally, the system's ability to identify anomalies or flaws allows for prompt maintenance and repair. These systems' scalability is an additional benefit. The components' modular architecture makes it simple to integrate them into the current infrastructure and add more panels and sensors as needed. This enables the development of energy systems that are tailored to fulfil certain requirements and are flexible enough to change with the times. The environment benefits from solar energy systems powered by the Internet of Things. They don't release any dangerous gases into the atmosphere and are a clean, renewable energy source. They are a sustainable and ethical option for energy generation because they also aid in lowering the carbon footprint of structures and organisations. As a whole, IoT-based solar energy gathering and tracking systems

VI. CONCLUSION

Traditional energy sources can be replaced with a cost-effective and environmentally friendly option with IoT-based solar energy collection and monitoring devices. Real-time data collection and analysis has many advantages, such as higher productivity, lower expenses, and enhanced dependability. These systems' scalability makes it simple to integrate them into the current infrastructure and modify them to suit certain requirements. Still, there is potential for these systems' implementation and design to be improved. There is always room for improvement in terms of component cost, durability and reliability, integration of energy storage systems, and performance optimisation through research. The switch to renewable energy sources, like solar energy, is essential for a sustainable future despite these obstacles. Systems for gathering and monitoring solar energy that are IoT-based are crucial. Systems for collecting and monitoring solar energy that are Internet of Things (IoT) based are crucial to this shift and have several advantages for the economy and environment. We should anticipate even more notable advancements in IoT-based solar energy systems as technology develops. These systems have the power to completely transform the energy industry and pave the way for a more prosperous and sustainable future for all.

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Evaluation of anti-diarrheal effect of the ethanolic extract of *Moringa oleifera* bark in mice model

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Abstract: Background: *Moringa oleifera* (MO) has a long tradition of folk use to relieve various illnesses. This study was conducted to examine the anti-diarrheal effects of the *Moringa oleifera* bark extract in mice.

Methods: The anti-diarrheal activity was assessed in mice using models of diarrhea induced by castor oil and magnesium sulfate (MgSO_4). Gastrointestinal motility was analyzed using barium sulfate (BaSO_4) milk, and total intestinal content was measured through a castor oil-induced enteropooling assay. The extract was administered orally at doses of 250 and 500 mg/kg body weight. Loperamide (10 mg/kg b.w. p.o) served as standard drug.

Results: *M. oleifera* extract demonstrated statistically significant and dose-dependent anti-diarrheal effect that was observed in reducing both the total number of feces and the episodes of diarrheal feces. Treatment with MO 500 mg/kg impeded significantly ($p < 0.05$) the diarrhea induced by castor oil. MO at 500 mg/kg inhibited defecation as well as diarrheal feces very highly significantly ($p < 0.001$) in MgSO_4 induced diarrhea where the extract impeded the diarrheal episodes by 70.59% ($p < 0.001$). The extract MO at 500 mg/kg reduced GI motility highly significantly ($p < 0.01$). Administration of MO at 250 mg & 500 mg/kg reduced the fluid accumulation in

mice as compared to the control group. Standard drug, loperamide (10 mg/kg) showed very highly significant ($p < 0.001$) antidiarrheal effect.

Conclusion: The results suggested that the extract exerts strong anti-diarrheal effect in mice model and further studies are needed to isolate the bioactive compounds responsible for these effects and the potential of the plant.

Key words: *Moringa oleifera*, Castor oil and $MgSO_4$ induced diarrhea, $BaSO_4$ induced GI motility, Enteropooling assay

Introduction

Gastrointestinal diseases especially constipation and diarrhea are affecting on 70% of the global population (Ouyang and & Chen, 2004). Diarrhea is an alteration in normal movement of bowel and is indicated by an increased water content, volume, or frequency of stools (Guerrant et al., 2001). In the developing countries it is common especially affecting in children and causes death of millions of people each year which is accounted as the second leading causes of death of children fewer than five years old (Jebunnessa et al., 2009; Saralaya et al., 2010). Medicinal plants are a potential source of anti diarrheal drugs because they contain multiple constituents with effect-enhancing and/or side effect-neutralizing potential (Damiki and Siva, 2011; Gilani and Rahman, 2005). Therefore, medicinal plants are a promising source of antidiarrheal drugs (Maikere-Faniyo et al., 1989).

The biodiversity of flora of Bangladesh is very broad, and several native Bangladeshi medicinal plant species have a long tradition of use with great phytotherapeutic potential (Shukla, (2009). So, research in medicinal plants is a vital sector for the discovery of promising drugs in Bangladesh (Mia and Ghani, 1990).

***Moringa oleifera* Lam.**, belonging to the family Moringaceae is commonly known as ‘Sajna’ or ‘Sajina’ in Bengali. The tree is native of the western and sub-Himalayan tracts, India, Pakistan, Asia, Africa and Arabia; distributed in the Philippines, Cambodia, Central America, North and South America and the Caribbean Islands (Mishra et al., 2011; Dubey et al., 2013). It is found in Bangladesh and is highly valued from time immemorial because of its vast medicinal properties (Mishra et al., 2011). Phytochemical studies on *Moringa oleifera* revealed major polyphenols such as quercetin glucosides, rutin, kaempferol glycosides and chlorogenic acids (Ndong et al., 2007), alkaloids, saponins, tannins, terpenoids, flavonoids, glycosides, gallic tannins, catechol tannins, steroids, triterpenoids, anthraquinones, and reducing sugars (Vinoth, Manivasagaperumal and Balamurugan, 2012; Kasolo et al., 2010). Traditionally, different parts of this plant is used as antispasmodic, stimulant, expectorant, antilithic, abortifacient, antifungal, antibacterial, tonic, bile flow increasing, cardiac circulatory tonic, antiseptic,

antipyretic, anthelmintic and antiepileptic (Nadkarni, 2009). It is also used in diabetes, nervous debility, asthma, enlarged liver and spleen, deep seated, inflammation, sore throat, hiccough, as antiparalytic, antiviral, anti-inflammatory and analgesic (Khare, 2007). *The Ayurvedic Pharmacopoeia of India* indicated the use of the dried root bark in goitre, glycosuria and lipid disorders; leaf, seed, root bark and stem bark in internal abscess and piles (Khare, 2007).

Materials and Methods

Collection of Plant materials and extract preparation: *Moringa oleifera* bark were gathered from the Savar area, close to Dhaka in Bangladesh. The taxonomical identification of the plant was confirmed by the department of Botany, Jahangirnagar University, Savar, Dhaka. Drying of the collected materials was carried out (at 35°-40° C), crushed into a coarse powder and subjected to Soxhlet extraction using ethanol. From the liquid extract mixture of active constituents, a viscous substance was achieved by drying under low pressure using a Rotary evaporator. The sample was further maintained fresh in refrigerator to carry out experiments. 1 kg of powdered sample was extracted using 2.5 L of ethanol and the yield value was found 5.5% w/w.

Animals used in experiments: The investigation was conducted out in mice (Swiss Albino) of both genders, weighing 25-30 g in the animal research lab in the Department of Pharmacy, Jahangirnagar University, Savar, Dhaka. A steady temperature of 22±5°C, 40-70% relative humidity in the room; a natural cycle of light & dark and an *ad libitum* food access was maintained before the day of experiment. The animals were acclimatized to laboratory condition for one week and were fasted for 12 hours prior to experiments. Approval was taken from the animal ethical committee of the institutes to conduct all animal experiments.

Acute toxicity studies

Study of the acute toxicity of the *M. oleifera* extract was conducted using previously prepared overnight fasted Swiss Albino mice (25-30 g). No mortality was found till 4000 mg/kg p.o (Kim et al., 2006).

Anti-diarrheal activity evaluation

Castor oil induced diarrhea in mice

Mice of both sexes starved for 12 h were allocated into distinct groups containing six mice in every group and treated with water (Group-1, control), Loperamide (Group-2, STD), *M. oleifera* 250 mg/kg (Group-3) and *M. oleifera* 500 mg/kg (Group-4) respectively. After a period of one hour from the treatment of extract, every group was orally fed castor oil to induce diarrhea. The total quantity of both dry and wet feces excreted by the animals was recorded hourly over a 4-hour period.

The activity of each group was represented as a percentage of defecation inhibition and diarrhea inhibition (Jebunnessa et al., 2009; Imam, Sultana and Akter, 2012).

Magnesium sulfate-induced diarrhea

Mice starved for 12 hours were allocated into distinct groups containing six mice in every group and treated with water (Group-1), Loperamide (Group-2), *M. oleifera* 250 mg/kg (Group-3) and *M. oleifera* 500 mg/kg (Group-4) respectively. After a period of one hour, each mouse received MgSO_4 p.o. to induce diarrhea. The activity was interpreted as the inhibition of defecation (%) and the inhibition of diarrhea (%) (Doherty, 1981).

Gastrointestinal motility test with BaSO_4 milk

Twenty-four mice of either sex starved for 12 hours were allocated into distinct groups containing six mice in every group and orally treated with water (Group-1), Loperamide (Group-2), *M. oleifera* 250 mg/kg (Group-3) and *M. oleifera* 500 mg/kg (Group-4) respectively. After a period of 30 minutes, each mouse was administered 15% barium sulfate milk through oral route. Thirty minutes following the administration of the BaSO_4 milk, the mice were euthanized. The distance traveled by the BaSO_4 milk was measured and expressed as a percentage of the length from the pylorus to the ileocecal junction. The percentage inhibition of GI motility was calculated by comparing it with the control group (Afroz et al., 2006).

Castor oil induced enteropooling

Twenty-four mice of either sex starved for 12 hours were allocated into distinct groups containing six mice in every group and orally treated with water (Group-1), Loperamide (Group-2), *M. oleifera* 250 mg/kg (Group-3) and *M. oleifera* 500 mg/kg (Group-4) respectively. After 1 h from the administrations, castor oil 0.5 ml per animal was administered orally. Two hours later, the mice were euthanized, and the small intestine was ligated at both the pyloric sphincter and the ileocecal junctions before being removed. The contents of each intestine were collected by milking into a graduated cylinder, and the volume (in milliliters) was measured (Ezeja and Anaga, 2010; Sini et al., 2008).

Statistical Analysis

Microsoft Office Excel (2007) was utilized as a statistical tool for analyzing inhibition assays and creating graphs. Analysis of data gathered from animal studies was executed using SPSS of version 16.0 for Windows. One-way ANOVA was employed following Dunnet's post hoc comparison. The data were shown in the format of Mean \pm SEM and level of significance were taken into consideration as significant when $p < 0.05$, it was highly significant if $p < 0.01$, and the result was very

highly significant if $p < 0.001$ in contrast to the respective vehicle treated disease group.

Result

The castor oil induced diarrhea test was utilized to demonstrate the effect of the of *M. oleifera* extract in experimentally induced diarrhea in mice. The results showed that, there has been a statistically significant reduction in the incident and severity of diarrhea with higher dose of the crude extract of MO in experimental animals.

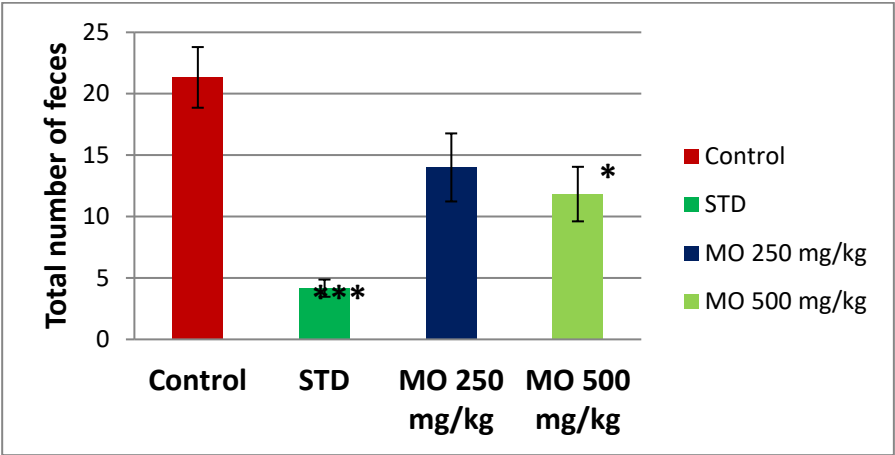


Figure 1: The impact of MO on the overall fecal count in a castor oil-induced diarrhea test in mice [N.B: The values were presented as Mean ± SEM, with n = 6. *($p < 0.05$) indicates significance, **($p < 0.01$) denotes highly significance, and ***($p < 0.001$) represents very highly significance when compared to the control group.]

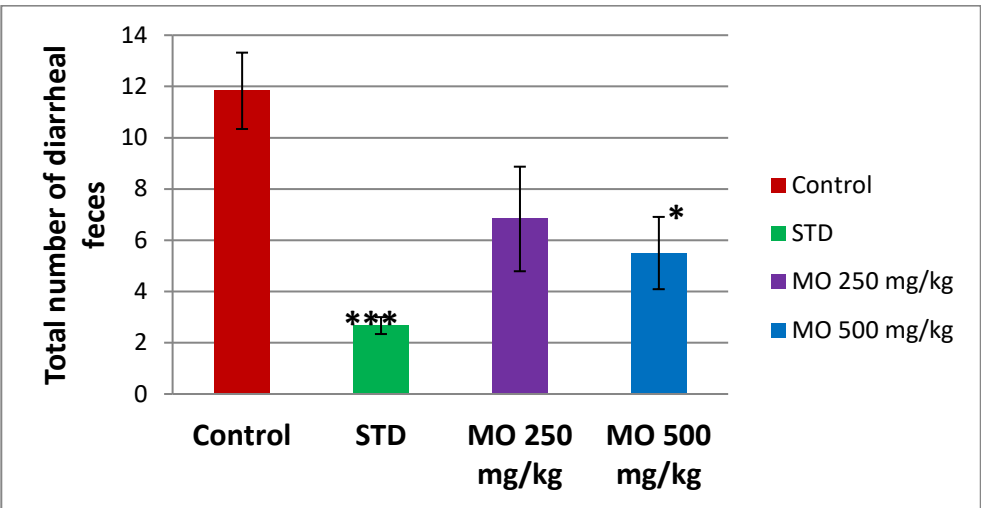


Figure 2: The impact of MO on the total diarrheal feces count in a castor oil-induced diarrhea test in mice [N.B: The values were presented as Mean \pm SEM, with n = 6. *(p < 0.05) indicates significance, **(p < 0.01) denotes highly significance, and ***(p < 0.001) represents very highly significance when compared to the control group.]

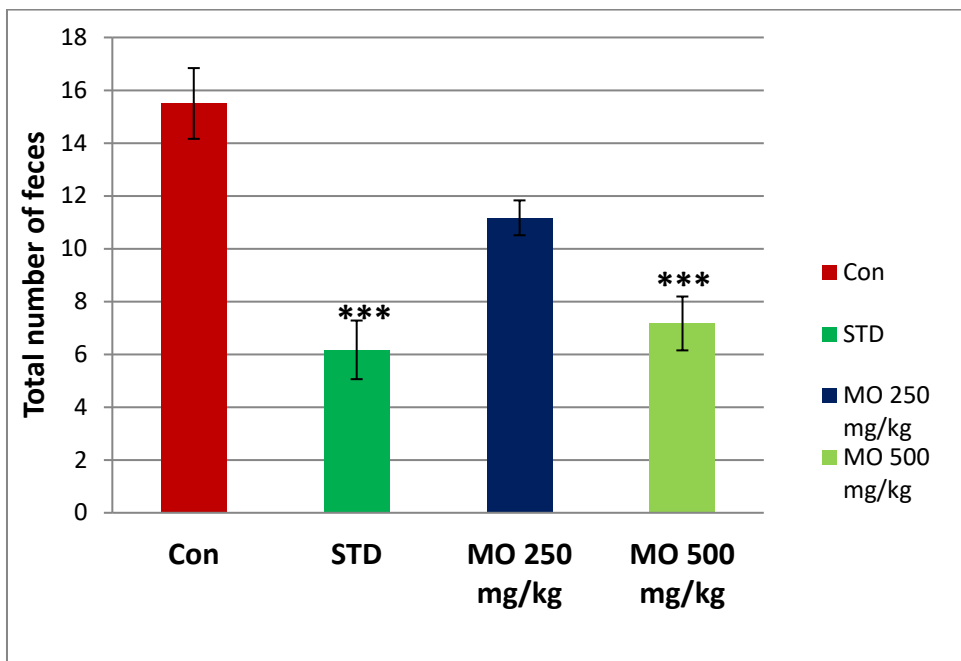


Figure 3: The impact of MO on the total number of feces in $MgSO_4$ induced diarrhea test in mice. [N.B: The values were presented as Mean \pm SEM, with n = 6. *(p < 0.05) indicates significance, **(p < 0.01) denotes highly significance, and ***(p < 0.001) represents very highly significance when compared to the control group.]

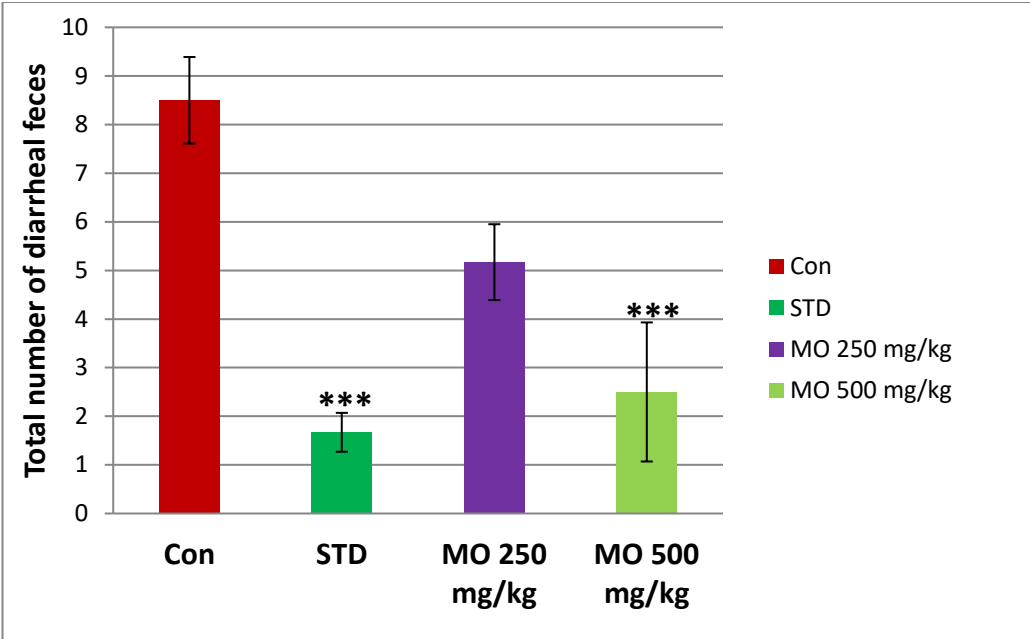


Figure 4: The impact of MO on the total diarrheal feces in MgSO₄ induced diarrhea test in mice [N.B: The values were presented as Mean ± SEM, with n = 6. *(p < 0.05) indicates significance, **(p < 0.01) denotes highly significance, and ***(p < 0.001) represents very highly significance when compared to the control group.]

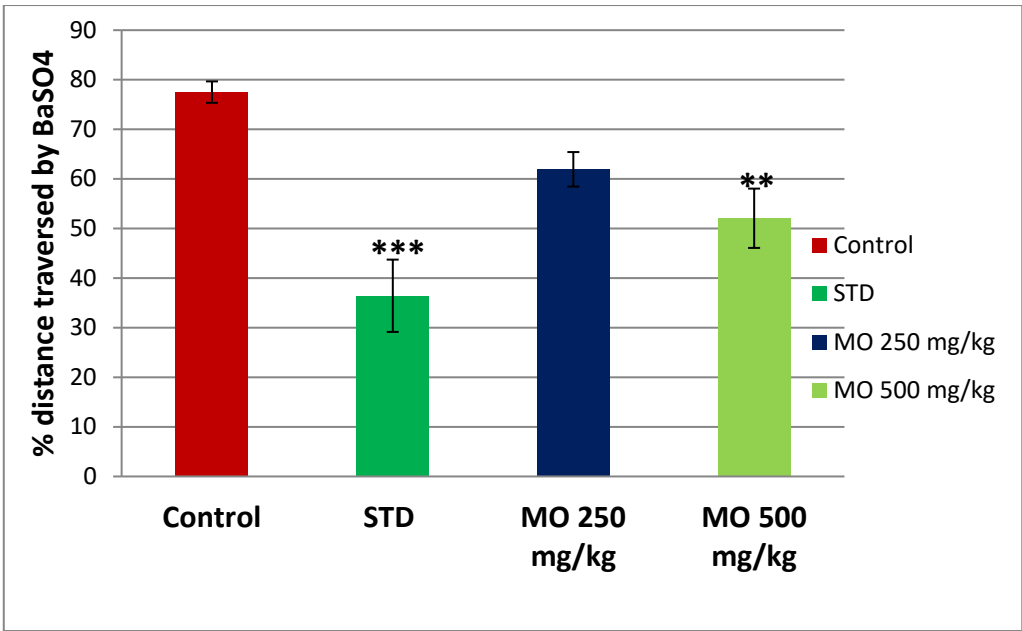


Figure 5: The impact of MO on the gastrointestinal motility (% distance traversed) of barium sulphate milk in mice [N.B: The values were presented as Mean ± SEM, with n = 6. *(p

< 0.05) indicates significance, **($p < 0.01$) denotes highly significance, and ***($p < 0.001$) represents very highly significance when compared to the control group.]

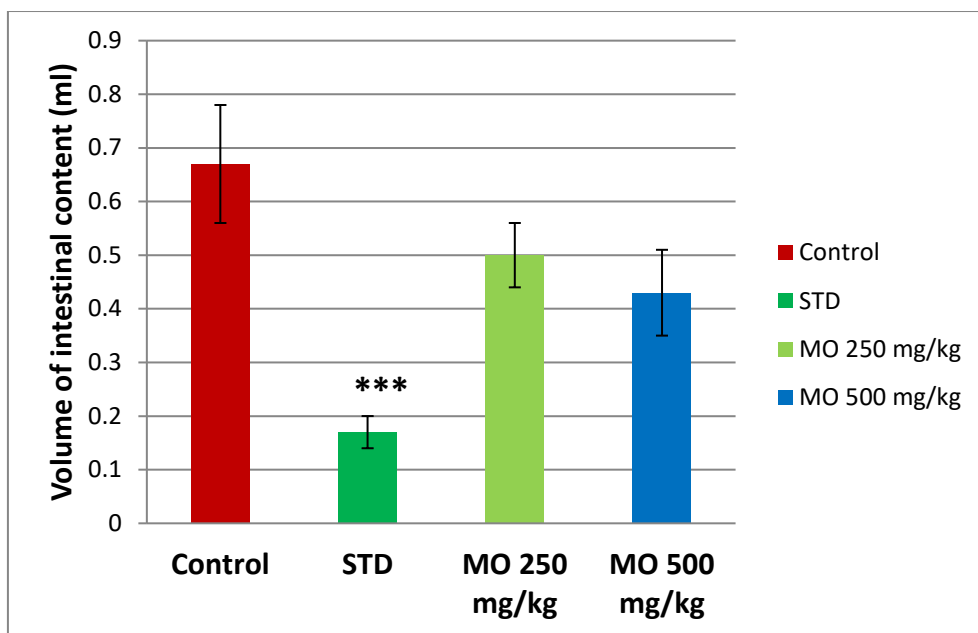


Figure 6: The impact of MO on the volume of intestinal content in castor oil induced enteropooling in mice [N.B: The values were presented as Mean \pm SEM, with $n = 6$. *($p < 0.05$) indicates significance, **($p < 0.01$) denotes highly significance, and ***($p < 0.001$) represents very highly significance when compared to the control group.]

Ethanolic extract of MO at 250 mg/kg, p.o. showed no significant reduction of defecation as well as diarrhea in castor oil induced diarrhea. MO at dose of 500 mg/kg significantly ($p < 0.05$) reduced the diarrhea induced by castor oil as compared to the vehicle treated control group. Crude extract of MO at 250 mg/kg reduced the number of fecal episodes by 34.36% and reduced the diarrheal episodes by 42.27%. MO 500 mg/kg reduced the number of animals suffering from diarrhea by reducing defecation by 44.54% and reduced the diarrheal episodes by 53.51%. Loperamide (10 mg/kg, p.o.) profoundly ($p < 0.001$), inhibited the fecal output (80.45%) and the diarrheal episodes (77.43%) produced by castor oil (figure 1 & figure 2).

The results of the effect of MO on $MgSO_4$ induced diarrhea have been showed in figure 3 & figure 4. Ethanolic extract of MO at 250 mg/kg, p.o. showed no significant effect on defecation and diarrhea. At the dose of 500 mg/kg, MO very highly significantly ($p < 0.001$) reduced the number of fecal episodes by 53.74% and reduced the diarrheal episodes by 70.59% ($p < 0.001$) when compared to the control group. The standard drug loperamide (10 mg/kg, p.o.) remarkably ($p < 0.001$),

inhibited both the fecal output (60.19%) and the diarrheal episodes (80.35%) produced by magnesium sulfate. In terms of protection from fecal output and diarrheal episodes at 4 hours, MO extract at 500 mg/kg dose was comparable with the effect of standard drug loperamide.

Barium sulfate was used to examine the effect of MO on the normal propulsive movement of GI tract. Crude extract of MO 250 mg/kg dose showed only slight insignificant reduction of GI motility by 20.09% when compared with the vehicle treated control group (figure 5). The MO extract at 500 mg/kg reduced GI motility highly significantly ($p < 0.01$) by 32.82%. Loperamide (10 mg/kg) reduced GI motility by 52.99% which was very highly significant ($p < 0.001$) as compared to the control group.

In enteropooling assay, castor oil administration caused a substantial increase of fluid accumulation in mice. The administration of MO at 250 & 500 mg/kg slightly (25.37% & 35.82%) and insignificantly reduced the fluid accumulation as compared to the control group (figure 6), whereas the standard drug loperamide (10 mg/kg) inhibited fluid accumulation by 74.63% which was very highly significant ($p < 0.001$).

Discussion

Diarrhea stands as a leading cause, affecting approximately 7.1 million incidents annually, contributing significantly to malnutrition and child mortality worldwide, with a particularly significant impact observed in developing nations (Victoria et al., 2000; Park, 2000). It's shown by an increased gastrointestinal activity compared to usual, loose stool, and discomfort or pain in the abdomen (Aranda-Michel and Gianella, 1999). The imbalance in the absorption and secretion processes within the intestinal tract leads to diarrhea, accompanied by an additional loss of fluid in the stool (Gaginella and Bass, 1978).

Castor oil, being a triglyceride, has prompted various theories in the past to elucidate its ability to cause diarrhea (Gaginella and Bass, 1978; Saalmüller, 1848). This initiates peristaltic motion and triggers significant contractions in the intestine, as well as in the transverse and distal colon. These contractions result in alterations in the permeability of electrolytes (specifically Na^+ and Cl^-) in the intestinal lining (Crocì et al., 1997; Palombo, 2006). Ethanolic extract of MO at 500 mg/kg dose showed significant antidiarrheal effect in castor oil induced diarrhea test in mice.

Magnesium sulfate functions as a laxative. Its cathartic effect is thought to arise from the retention of water through osmosis, subsequently triggering peristalsis. MgSO_4 might also induce the release of cholecystokinin, prompting the accumulation of fluid and electrolytes within the intestines and enhancing intestinal

movement (Pasricha, 2006). The ethanolic extract of MO 500 mg/kg showed very highly significant effect in MgSO_4 induced diarrheal feces.

Barium sulfate enlarges the volume of intestinal contents by inhibiting water reabsorption. Additionally, it triggers the release of cholecystokinin from the duodenal lining, enhancing small intestine secretion and movement while impeding the reabsorption of NaCl and water. The diarrhea induced by barium sulfate is thought to result from its osmotic qualities and stimulation of cholecystokinin production (Galvez et al., 1993). Ethanolic extract of MO at 500 mg/kg showed highly significant effect on the reduction of GI motility in BaSO_4 induced GI motility test, which reveals the antidiarrheal activity of MO on secretion and motility of small intestine as well as preventing NaCl re-absorption.

Castor oil is recognized for its ability to enhance the fluid content in the intestines and indirectly induce diarrhea by means of its active component, ricinoleic acid, which is produced when the oil undergoes hydrolysis (Iwao and Terada, 1962). This alteration affects the transport of electrolytes and water (Gaginella and Phillips, 1975). The increased fluid accumulation in the intestine triggered by castor oil is likely a result of boosting cyclic AMP/GMP production and activating cystic fibrosis transmembrane conductance regulators (CFTRs). This process then promotes intestinal movement and enhances the release of fluids and electrolytes, particularly chloride (Cl^-) and sodium (Na^+) (Capasso et al., 1988; Ratnaike, Milton and Nigro, 2000). Administration of MO reduced the castor oil-induced fluid accumulation in mice although it was insignificant. Therefore, the MO bark extract mediated the antidiarrheal effect by decreasing the secretion of fluids and electrolytes as well as inhibiting the GI motility.

Conclusion

The findings of the current study suggest that, *Moringa oleifera* bark extract exhibits strong inhibitory action on gastrointestinal movement and secretion showing significant anti-diarrheal activity. This discovery offers scientific back up for the folk use of this plant to alleviate diarrhea, suggesting it could be a promising therapeutic option for effectively managing the disorder. Efforts are being actively pursued to thoroughly examine the mechanisms involved in the activities. The compounds isolated from this plant may act as useful prototypes of anti diarrheal drugs from *M. oleifera* with lacking of certain untoward effects.

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Investigating the Impact of Bank-Specific and Macroeconomic Determinants on the Profitability of State-Owned Banks: An Empirical Evidence from an Emerging Economy

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Abstract: The purpose of this study is to find the impact of bank specific and macroeconomic drivers of profitability of state-owned banks in Bangladesh. The study adopted explanatory research design. Data from 2010 to 2023 have been collected from the annual reports of six state-owned banks and World Bank Open Data resulting a panel dataset of 84. For data analysis, pooled OLS, fixed effect and random effect methods have been adopted. Bank size, total loans to total assets ratio and NPL to total loans ratio have been found negatively statistically significant in affecting the profitability of banks. Inflation rate is positively associated with the profitability indicator ROA. Moreover, various diagnostic tests such as VIF, Breusch- Pagan/Cook-Weisberg test and Wooldridge test have been conducted to detect the problems of multicollinearity, heteroskedasticity and autocorrelation respectively. The study is useful for bankers, regulators and other concerned parties in detecting the drivers of profitability of state-owned banks and what steps they can take to develop the performance of state-owned banks. This paper is unique from the perspective of Bangladesh since very few studies regarding the profitability of state-owned banks in Bangladesh have been conducted.

Keywords: *State-owned banks, Profitability, ROA, Bangladesh, Emerging economy*

JEL Classification code: C12, C33, G21

1. Introduction

The banking industry of Bangladesh has been experiencing profound transformation in recent decades due to the impact of globalization and technological revolution which create opportunities and obstacles for the advancement of the banking industry. Banks play important role in executing the monetary policy of a country (Ullah et al., 2020). Profitable banks ensure the stability of economic growth and financial system (Al-Harbi, 2019). Hence, it is important to recognize the factors influencing banks' profitability to sustain negative economic shocks and preserve financial stability (Rehman et al., 2018). Profitability is sometimes regarded as prerequisite for innovative and globally challenged banking industry. Thus, it is important to find out the drivers which affect the profitability of banks.

There are several problems in the banking industry of Bangladesh such as increase of NPL, loan-loss provision, corporate governance problems etc. which negatively affect banks' profitability. These problems are also alarming for the state-owned commercial banks¹ in Bangladesh. These banks are facing capital shortfalls and non-performing loans among others which could lead to lower profits for banks (Saad, 2024). Therefore, this study tries to find the answer to the question of what factors are affecting the profitability of state-owned commercial banks in Bangladesh.

Based on the panel data of 84 observations, the study has tried to investigate the impact of bank specific and macroeconomic determinants of bank profitability. Data were collected from the annual reports of six state-owned banks and World Bank Open Data. The results suggest that bank size, loans to total assets ratio, NPL to total loans ratio and inflation rate are significant determinants of state-owned banks' profitability. It is observed that due to large size of the state-owned banks, they face bureaucratic problem leading to the lower profitability of banks. Also, non-repayment of loans by borrowers increases the NPLs of these banks which also help reduce the bank profitability. However, it is also possible that state-owned banks might have anticipated inflation rate, adjusted the interest rate on loans and deposits and increased their profitability.

¹ State-owned commercial banks, and state-owned banks are used interchangeably for the simplicity of the study.

There are several studies which investigated the impact of bank specific and macroeconomic drivers on the profitability of banks (Koroleva et al., 2021; Moussa, 2012; Raza et al., 2013, Sufian & Habibullah, 2009). However, there are very few studies regarding the drivers of profitability of state-owned banks in Bangladesh (Foisal et al., 2016; Majumder & Uddin, 2017; Ullah et al., 2020). Hence, the objective of this study is to investigate the impact of bank specific and macroeconomic drivers of state-owned banks profitability. This study contributes in several ways. First, it provides information about the enormous effect of NPL on bank profitability. Second, the study is useful for bankers, regulators and other concerned parties in detecting the drivers of profitability of state-owned banks and what steps they can take to develop the performance of state-owned banks.

The rest of the paper is structured as follows. Chapter 2 provides the details information about the previous related studies. Chapter 3 deals with the research methodology. Chapter 4 presents the analysis and results of the study. Finally, chapter 5 provides the concluding remarks of the study.

2. Literature Review

Table 1: Previous related studies

No	Study by	Dependent variables	Independent variables	Sample size	Time period	Data	Country	Methods
1	Bhattarai (2018)	ROA	Default risk, capital adequacy ratio, cost per loan assets, GDP growth rate, exchange rate & inflation rate.	102	2011-2016	Annual reports, websites of Nepal Rastra Bank (NRB) & Ministry of Finance (MoF)	Nepal	Pooled OLS method.
2	Foisal et al. (2016)	ROA	CAR, cost of liabilities to total liabilities, loans to total deposits, interest cost to interest income, NPL to total loans, bank size, GDP growth & inflation.	24	2007-2014	Annual reports & Economic Review of Bangladesh.	Bangladesh	Pooled OLS method.
3	Gwachha (2019)	ROA, ROE & NIM	Bank size, equity capital to total asset, total loans to total assets, total deposits to total assets, total liquid assets to total assets, GDP, inflation & real interest rate.	510	2004-2013	Annual reports, Nepal Rastra Bank (NRB) reports, Nepal Stock Exchange (NEPSE), Security Board of Nepal (SEBON) & World Bank.	Nepal	Pooled OLS method.
4	Haddad et al. (2022)	ROA & ROE	Assets size, equity to total assets, loans to total assets, liquid assets to total assets, deposits to total assets, NIM, GDP rate, inflation rate & real interest rate.	132	2009-2019	Financial statements & central bank of Jordan.	Jordan	Pooled OLS method.
5	Kanwal & Nadeem (2013)	ROA, ROE & equity multiplier	Inflation rate, GDP rate & real interest rate.	180	2001-2011	Annual reports, World Bank Publication & Economic Survey of Pakistan.	Pakistan	Pooled OLS method.

6	Koroleva et al. (2021)	ROA & ROE	Net loan to total asset, NPL to total assets, loan loss provision to total assets, cash and cash equivalents to total assets, deposits to total assets & GDP	65	2007-2019	Annual financial report & National Bureau of Statistics.	China	Pooled OLS, fixed effect, and random effect methods.
7	Majumder & Uddin (2017)	ROA	NPL to total loans, CAR, loans to total assets, non-interest income to total income, bank size, off-balance sheet activities to total assets, GDP growth & inflation	20	2010-2014	Financial statements & World Development Indicator.	Bangladesh	Pooled OLS method.
8	Moussa (2012)	ROA & ROE	Equity to total assets, total loans to total assets, Interest income to interest expense, liquid assets to total assets, bank size, GDP rate & inflation rate.	250	2001-2010	Website of Central Bank of Turkey.	Turkey	VAR model.
9	Priharta & Gani (2024)	ROA & ROE	Capital adequacy ratio, non-performing loans, foreign exchange rates, bank size & interest rate.	40	2011-2020	Secondary	Indonesia	Random effect method.
10	Raza et al. (2013)	Bank profitability	Bank size, loan loss provisions to total loans, loans to total assets, tax to EBIT, market capitalization, noninterest income to total interest revenue earned, bank assets to GDP, market capitalization to GDP & inflation rate.	180	2001- 2010	Official database of State Bank of Pakistan & World Bank.	Pakistan	Random effect model, pooled OLS, GMM, dynamic OLS and fully modified OLS.
11	San & Heng (2013).	ROA, ROE & NIM	Equity to asset ratio, loan loss reserves to gross loans, cost to income ratio, liquid assets/deposit and short-term funding, bank size, GDP growth & inflation	140	2003-2009	Bankscope, Department of Statistic Malaysia & World Economic Outlook.	Malaysia	Pooled OLS method.
12	Subbarayan & Jothikumar (2017)	ROA	Bank size, capital adequacy ratio, net interest income to total assets, reserves and surplus, operating expenses to total assets, capital, GDP, inflation rate & market concentration.	104	2010-2016	Reserve Bank of India & website of Hand book of Statistics on Indian Economy	India	Pooled OLS method.

13	Sufian (2011)	ROA & ROE	Log of total assets, loans loss provisions to total loans, non- interest income to total assets, total overhead expenses to total assets, log of total deposits & book value of stockholders' equity as a fraction of total assets, GDP, inflation rate, asset concentration ratio, dummy of pre-crisis period, dummy for crisis period & dummy for post crisis period.	251	1992-2003	Bankscope database & IMF Financial Statistics (IFS).	Korea	Fixed effect & random effect methods.
14	Sufian & Habibullah (2009)	ROA	Total loans to assets, bank size, loan loss provisions to total loans, non-interest income to total assets, non-interest expense to total assets, equity to total assets, GDP, inflation rate & money supply.	220	2000-2005	Bank Scope & IMF Financial Statistics (IFS) database.	China	Fixed effect method.
15	Ullah et al. (2020)	ROA	NPLs to total loans, investment to deposits, equity to assets, debt to equity & Bank size.	25	2014-2018	Annual reports	Bangladesh	Pooled OLS method.

Note: Table 1 summarizes the previous studies related to the bank profitability. The paper reviews total of 15 papers around the world and among these, there are 3 papers of Bangladeshi authors who investigated the drivers of bank profitability.

Based on the discussion above, it can be concluded that a large number of studies regarding the bank profitability have been conducted over the years. However, only few studies focus on the drivers of profitability of state-owned banks in Bangladesh (Foissal et al., 2016; Majumder & Uddin, 2017; Ullah et al., 2020). Moreover, these studies only used the pooled OLS method. This paper also tries to present the results based on other methods such as fixed effect and random effect methods, thereby helping to reduce the research gap.

3. Research Methodology

3.1 Research design: This is an explanatory research that shows the impact of bank specific and macroeconomic factors on profitability by investigating the impact of these factors on the profitability calculated with ROA of state-owned banks in Bangladesh since 2010.

3.2 Sample and data: Preparation of this paper requires only secondary data collected for the last 14 years since 2010 of 6 state-owned commercial banks in Bangladesh based on convenience sampling method under a non-probabilistic approach. The secondary sources of bank specific factors were banks' audited financial statements and the macroeconomic data were collected from the database of World Bank Open Data.

3.3 Variables: This paper focuses on the impact of bank specific and macroeconomic variables on the profitability of state-owned banks in Bangladesh. The operationalization of the variables is summarized in Table 2.

3.3.1 Dependent variables: For this study, return on assets (ROA) has been taken as dependent variable (Faisal et al., 2016; Koroleva et al., 2021; Majumder & Uddin, 2017; Priharto & Gani, 2024). It is calculated as net profit divided by total assets. It shows how effectively banks' assets are used to generate revenues by the management of banks (Hassan and Bashir, 2003). Golin (2001) indicated ROA as the best measure for bank profitability. Therefore, the study has taken ROA as the proxy for profitability of the state owned banks in Bangladesh.

3.3.2 Independent variables: Bank size, asset quality and credit risk have been taken as bank specific internal factors whereas economic growth measured by GDP rate, inflation and interest rate have been adopted as macroeconomic variables to see their impact on the profitability of state-owned banks.

Bank size: Bank size has been taken as the natural logarithm of total assets of banks (Gwachha, 2019; Sufian & Habibullah, 2009; Subbarayan & Jothikumar, 2017). Due to the economies of scale or size of the bank, profitability of bank rises initially but declines if the size crosses the maximum level. Several studies have found either a positive or negative relationship between bank size and profitability (Faisal et al., 2016; Gwachha, 2019; Subbarayan & Jothikumar, 2017). Study of Smirlock (1985) suggested a positive effect between bank size and profitability. There exists several findings related to bank size and profitability (O'Connell, 2023). As the impact of bank size on profitability is unclear, this study cannot formulate any expectation between bank size and profitability.

Asset quality: Asset quality of the banks is measured by the ratio of total loans to total assets. Previous studies found a positive relationship between loans and profitability (Haddad et al., 2022; Gwachha, 2019). Banks generate more interest income and net profit by issuing more loans. High loan to total assets ratio indicates bank is granting more loans. However, issuing excessive loans increases the chance of credit risk. Several studies found the positive relationship between loans to total assets ratio (Alper & Anbar, 2011; Khrawish, 2011; Sufian, 2011; Syafri, 2012). Based on the discussion, following hypothesis is generated-

H₁: There is a significant positive relationship between asset quality and bank profitability.

Credit risk: Credit risk is measured by NPL to total loans ratio. High NPL to total loans ratio leads to poor quality of loan portfolio and low level of profitability (Islam et al., 2017). Several studies suggest profitability of banks is negatively related to the amount of non- performing loans (NPLs) (Bhattarai, 2018; Foisal et al., 2016; Majumder & Uddin, 2017; Ullah et al., 2020). Considering above situation, the following hypothesis is created-

H₂: There is a significant negative relationship between credit risk and bank profitability.

Economic growth: GDP growth rate has been taken as the proxy of economic growth and it has been calculated using the annual GDP growth rate. When economic condition is favourable, financial transactions will be smooth and borrowers can service their loans. It has been suggested that GDP growth rate and bank profitability have positive relation (Gwachha, 2019, Kanwal & Nadeem, 2013; San & Heng, 2013). The following hypothesis is created to show the impact of economic growth on ROA-

H₃: There is a significant positive relationship between economic growth and bank profitability.

Inflation: Inflation is known as the rise in the price of most goods and services of common use. Impact of inflation on profitability mostly depends on whether it is anticipated or unanticipated. Perry (1992) denoted that banks generate high profit by charging high rates on loan when inflation can be anticipated. But banks fail to adjust rate timely and incur low profits and losses when inflation is unanticipated. Therefore, various studies recommended that inflation is either positively or negatively affecting the bank profitability (Haddad et al., 2022; Subbarayan & Jothikumar, 2017; Sufian & Habibullah, 2009). The expected relationship between inflation and profitability is ambiguous (Athanasoglou et al., 2008), To remove the ambiguity, this study has assumed that banks can anticipate inflation to adjust their profits and hence, the following hypothesis is generated-

H₄: There is a significant positive relationship between inflation and bank profitability.

Interest rate: Effect of interest rate on bank profitability is measured in terms of real interest rate (Gwachha, 2019; Haddad et al., 2022). The impact of interest rate on bank's costs is faster than its impact on bank's revenues, consequently negatively affecting profitability of banks (Haddad et al., 2022). Moreover, borrowers will be less likely to request for loans if high interest rate is imposed since it reduces their ability to service their loans (Gordon & Bradford, 1980). Based on the discussion, the following hypothesis is formulated-

H₅: There is a significant negative relationship between interest rate and bank profitability.

3.4 Econometric models: To investigate the data collected from various secondary sources, econometric models using pooled OLS (POLS), fixed effect (FE) and random effect (RE) methods have been developed based on established hypotheses. Model 1 includes only the bank specific variables, model 2 contains macroeconomic variables and finally, model 3 takes into account both bank specific and macroeconomic factors to see their impact on the profitability measured by ROA of state-owned commercial banks.

Equations developed for Pooled OLS and FE methods under model 1

$$ROA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 TLTA_{it} + \beta_3 NPLL_{it} + \mu_{it} \dots \dots \dots (1)$$

Equations developed for RE method under model 1

$$ROA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 TLTA_{it} + \beta_3 NPLL_{it} + \varepsilon_{it} + \mu_{it} \dots \dots \dots (2)$$

Equations developed for Pooled OLS and FE methods under model 2

$$ROA_{it} = \beta_0 + \beta_4 GDPR_{it} + \beta_5 INFL_{it} + \beta_6 INTR_{it} + \mu_{it} \dots \dots \dots (3)$$

Equations developed for RE method under model 2

$$ROA_{it} = \beta_0 + \beta_4 GDPR_{it} + \beta_5 INFL_{it} + \beta_6 INTR_{it} + \varepsilon_{it} + \mu_{it} \dots \dots \dots (4)$$

Equations developed for Pooled OLS and FE methods under model 3

$$ROA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 TLTA_{it} + \beta_3 NPLL_{it} + \beta_4 GDPR_{it} + \beta_5 INFL_{it} + \beta_6 INTR_{it} + \mu_{it} \dots \dots \dots (5)$$

Equations developed for RE method under model 3

$$ROA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 TLTA_{it} + \beta_3 NPLL_{it} + \beta_4 GDPR_{it} + \beta_5 INFL_{it} + \beta_6 INTR_{it} + \varepsilon_{it} + \mu_{it} \dots \dots \dots (6)$$

Table 2: Definition and summary statistics of determinants affecting profitability

Variables	Symbol	Definition	Expected Sign	N	Mean	Standard Deviation	Maximum	Minimum
Dependent variables								
Bank Profitability	<i>ROA</i>	Net income / Total assets	N/A	84	0.0008	0.0149	-0.0729	0.0256
Independent variables								
Bank Specific Variables								
Bank Size	<i>SIZE</i>	Log of total assets	+/-	84	12.2827	1.1339	10.1251	13.6248
Asset Quality	<i>TLTA</i>	Total loans / Total assets	+	84	0.5381	0.1055	0.3202	0.7642
Credit Risk	<i>NPLL</i>	NPL / Total loans	-	84	0.1485	0.0932	0.0025	0.3528
Macroeconomic Variables								
Economic Growth	<i>GDPR</i>	Growth rate of GDP	+	84	0.0645	0.0109	0.0345	0.0788
Inflation	<i>INFL</i>	Inflation rate	+/-	84	0.0649	0.0156	0.0542	0.1140
Interest Rate	<i>INTR</i>	Real interest rate	-	84	0.0346	0.0494	-0.1364	0.0689

Source: Developed by author.

Note: Table 2 presents the definition and summary statistics of determinants affecting profitability of this study. ROA has been taken as dependent variable. SIZE, TLTA and NPLL are bank specific drivers . GDPR, INFL and INTR are macroeconomic drivers of bank profitability.

4. Analysis and Results

4.1 Diagnostic test

Variance inflation factor (VIF) is used to measure the problem of multicollinearity. If the VIF value is less than or equal to 5, it can be concluded that the model does not suffer from the problem of multicollinearity (Akinwande et al., 2015). In Table 3, the mean VIF values for all three models are less than 5. Therefore, it can be concluded that the model do not suffer from the multicollinearity problem. Table 3 also suggests that the models do not suffer from the problems of heteroskedasticity and autocorrelation tested by Breusch- Pagan/Cook-Weisberg test and Wooldridge test respectively.

4.2 Model specification test

To choose the appropriate method among pooled OLS, fixed effect and random effect methods, F test, Hausman test and Breusch-Pagan LM test have been conducted. To choose between pooled OLS and FE methods, F test has been used where alternative hypothesis has been set as FE method is better than pooled OLS. However, as the p value under F test is greater than 0.05 for all three models, it can be concluded that pooled OLS method is appropriate in explaining the drivers of state-owned banks' profitability. Besides, Hausman test has also been employed to choose between FE and RE methods where alternative hypothesis has been formulated as FE method is preferred to RE method (Rubaiyath & Lalon, 2023). Yet, p value of greater than 0.05 under Hausman test rejected the alternative hypothesis indicating RE method is suitable. Lastly, to choose between pooled OLS and RE methods, BP LM test has been used where alternative hypothesis specifies that RE method is better than pooled OLS method (Lalon & Mili, 2023). The p value of greater than 0.05 under BP LM test indicates that pooled OLS method is better than RE method. Therefore, the study has chosen pooled OLS method in explaining the factors affecting the profitability of state-owned banks for all three models. However, the study has also demonstrated the results based on fixed effect and random effect for comparison purpose.

Finally, Ramsey RESET test has been applied to find whether the models have any omitted variables and it has been observed that the models do not have any omitted variables.

Table 3: Summary of Test Statistics

Test For	Test	Test Statistics		
		Dependent Variable - ROA		
		Model 1	Model 2	Model 3
		Bank Specific Variables	Macroeconomic Variables	All variables
Multicollinearity	VIF	Mean VIF = 1.64	Mean VIF = 1.06	Mean VIF = 1.36
Model Selection				
Between POLS & FE	F Test	F (6, 74) = 2.41 (p = 0.1147)	F (6, 74) = 3.66 (p = 0.1131)	F (6, 71) = 2.15 (p = 0.0983)
Between RE & FE	Hausman Test	χ^2 (3) = 1.30 (p = 0.7298)	χ^2 (3) = 0.02 (p = 0.9994)	χ^2 (6) = 0.50 (p = 0.9979)
Between POLS & RE	Breusch-Pagan LM (BP LM) Test	$Chibar^2$ (01) = 2.41 (p = 0.0604)	$Chibar^2$ (01) = 14.01 (p = 0.0720)	$Chibar^2$ (01) = 0.00 (p = 1.0000)
Heteroskedasticity	Breusch-Pagan/Cook-Weisberg Test	χ^2 (1) = 28.24 (p = 0.1223)	χ^2 (1) = 21.55 (p = 0.1106)	χ^2 (1) = 31.59 (p = 0.1345)
Autocorrelation	Wooldridge Test	F (1, 5) = 0.17 (p = 0.6973)	F (1, 5) = 11.00 (p = 0.0511)	F (1, 5) = 7.334 (p = 0.0624)
Specification Bias	Ramsey RESET Test	F (3, 77) = 1.28 (p = 0.2861)	F (3, 77) = 1.42 (p = 0.2423)	F (3, 74) = 0.83 (p = 0.4810)

Note: Table 3 indicates the summary of test statistics. Variance inflation factor (VIF) is used to test for multicollinearity problem. F test, Breusch-Pagan LM test and Hausman test have been used for appropriate methods selection. For heteroskedasticity and autocorrelation, Breusch-Pagan/Cook-Weisberg test and Wooldridge test have been implemented respectively. Finally, for specification bias, Ramsey RESET test is applied. For F test, Hausman test, Breusch-Pagan LM test, Breusch-Pagan/Cook-Weisberg test, Wooldridge test and Ramsey RESET test, statistical significance level has been set to 5% .

4.3 Regression results

To investigate the impact of bank specific and macroeconomic variables on state-owned banks' profitability, we have adopted pooled OLS regression method. Table 4 presents the regression results based on pooled OLS method. In model 3, bank size (SIZE) ($\beta = -0.0057, p < 10\%$) is statistically significant in affecting bank profitability under Pooled OLS method consistent with the finding of Majumder & Uddin (2017). The negative outcome suggests that growing bank size may produce positive result up to a certain threshold due to economies of scale however, beyond that point, bank size could lead to negative result because of the impact of bureaucratic and other causes (Eichengreen and Gibson, 2001)

Asset quality (TLTA) ($\beta = -0.0810, p < 10\%$) has also been found negatively statistically significant in affecting the bank profitability similar to the outcome of Koroleva et al. (2021). The result specifies that for 1 unit increase in total loans, ROA will decrease by 0.0810 unit. It is possible that due to excessive lending, banks may face high credit risk for which they have to maintain loan loss provision. Loan loss provision essentially reduces the net profit of the banks leading to the decreasing ROA. Moreover, high ratio of loans to total assets ratio depicts risky liquidity situation leading to negative future investment and profits (Akhtar, 2020).

In terms of credit risk, the variable credit risk (NPLL) ($\beta = -0.0012, p < 10\%$) has also been found negatively significant in affecting the profitability of state owned banks in Bangladesh consistent with the findings of Faisal et al., (2016); Majumder & Uddin, (2017); Ullah et al., (2020). The result indicates that for 1 unit increase in the NPL of banks, profitability measured by ROA decreases by 0.0012. Possible explanation could be that banks were not able to recover bad loans, resulting in surge in non performing loans of state owned banks (Rahman, 2024) which could lead to the decrease of net profit.

Considering macroeconomic drivers, the variable inflation (INFL) ($\beta = 0.2432, p < 10\%$) has been discovered statistically significant in having impact on bank profitability consistent with the findings of Majumder & Uddin (2017). The outcome may imply that for 1 unit rise in inflation rate, ROA might increase by 0.2432 unit. It could be concluded that state owned banks might have anticipated inflation rate and adjusted the interest rate accordingly therefore, banks generated high profits (Perry, 1992)

Table 4: Regression results

Independent variables	Dependent variable - ROA								
	Model 1 (Bank Specific Variables)			Model 2 (Macroeconomic Variables)			Model 3 (All Variables)		
	Pooled OLS	FE	RE	Pooled OLS	FE	RE	Pooled OLS	FE	RE
Constant	0.1148*** (0.0244)	0.2170*** (0.0720)	0.1228*** (0.0319)	-0.0111 (0.0119)	-0.0090 (0.0111)	-0.0095 (0.0113)	0.1016*** (0.0255)	0.1711** (0.0723)	0.1016*** (0.0255)
SIZE	-0.0057*** (0.0017)	-0.0139** (0.0056)	-0.0062*** (0.0022)				-0.0057*** (0.0016)	-0.0110* (0.0056)	-0.0057*** (0.0016)
TLTA	-0.0815*** (0.0166)	-0.0808*** (0.0229)	-0.0829*** (0.0189)				-0.0810*** (0.0161)	-0.0896*** (0.0224)	-0.0810*** (0.0161)
NPLL	-0.0040 (0.0199)	-0.0110 (0.0204)	-0.0061 (0.0196)				-0.0012* (0.0193)	-0.0023 (0.0201)	-0.0012* (0.0193)
GDPR				-0.0720 (0.1503)	-0.0740 (0.1373)	-0.0737 (0.1356)	-0.0594 (0.1305)	-0.0481 (0.1260)	-0.0594 (0.1305)
INFL				0.2475** (0.1042)	0.2180** (0.1019)	0.2226** (0.0959)	0.2432*** (0.0909)	0.2340** (0.0969)	0.2432*** (0.0909)
INTR				0.0130 (0.0337)	0.0137 (0.0308)	0.0136 (0.0304)	0.0176 (0.0292)	0.0175 (0.02810)	0.0176 (0.0292)
N	84	84	84	84	84	84	84	84	84
R-Squared	0.2553	0.2463	0.2536	0.2356	0.2275	0.2353	0.3319	0.2623	0.3319

Note: Table 4 presents the regression results for 3 models of the study. Model 1 includes bank specific variables, model 2 includes macroeconomic variables and model 3 includes both bank specific and macroeconomic variables. For Pooled OLS and RE methods, SIZE, TLTA, NPLL and INFL are statistically significant under model 3. For FE method, SIZE, TLTA and INFL are statistically significant under model 3. Standard errors are shown in parentheses. ***p < 1%, **p < 5% and *p < 10% show statistical significance levels.

5. Conclusions, implications and future scope of research

This paper investigates the impact of bank-specific and macroeconomic determinants on the profitability of state-owned banks in Bangladesh. The results reveal that bank size, loans to total assets, NPL to total loans and inflation rate are significant drivers of state-owned banks' profitability. It is observed that due to large size of the state-owned banks, they face bureaucratic problem which leads to the lower profitability of banks. Also, loan default by borrowers increases the NPLs of these banks which also help reduce the bank profitability. Moreover, state owned banks might have anticipated inflation rate, adjusted the interest rate and profitability.

This study will add new dimension to the existing literatures regarding the profitability analysis of banking sector by incorporating the drivers of state-owned banks' profitability. The study is useful for bankers, regulators and other concerned parties in detecting the factors affecting the profitability of state-owned banks and what steps can be adopted to develop the performance of state owned banks. The paper provides information about the effect of NPL on bank profitability. State-owned banks can separate troubled loans from goods loans and can take necessary steps to combat against NPL leading to maximum profitability of banks. Moreover, profitable banks will be able to generate more banking products and services and directly contribute in improving the economy of Bangladesh.

While the study provides important insight into the impact of bank specific and macroeconomic factors on state-owned banks' profitability, other variables can also be incorporated into the models for future studies. Variables such as capital adequacy ratio, loans to deposits ratio, loan-loss provisions to total loans ratio, cost to income ratio, growth of foreign remittance can be added into the models to find out a comprehensive analysis on bank profitability. Moreover, conventional private commercial banks, Islami Shariah based banks and foreign commercial banks can also be considered to get a robust overview of the profitability of banking industry of Bangladesh.

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Literary Representation of Social Death: Perspective of a poem written by Rudra Mohammad Shahidullah and W. H. Auden.

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Abstract:

This paper explores the literary representation of *social death* through the poetic works of Rudra Mohammad Shahidullah and W. H. Auden. Literature has a long history of reflecting social consciousness and a medium for expressing the evolving conditions of human identity. In the modern era—marked by materialism, individualism, and existential anxiety—both poets reflect a profound crisis of social existence. Through a close, qualitative analysis supported by critical reviews, scholarly articles, newspapers, and books, this study examines how abstract ideas such as success, identity, alienation, and modern values are encoded in their poetry. The paper traces the progression from the image of the modern self to themes of psychological estrangement, voluntary exile, and systemic marginalization. These recurring motifs collectively point to the sociological phenomenon of *social death*—a condition where individuals, though biologically alive, are rendered socially invisible or irrelevant. While “social death” originates as a sociological construct, this paper argues that Shahidullah and Auden articulate its essence metaphorically, revealing the disintegration of human connection in modern society. Their poetic representations serve not only as artistic expressions but as cultural critiques of dehumanization in contemporary life.

Keywords: modern identity, alienation, social death, voluntary exile, modern slavery

Introduction:

Rudra Mohammad Shahidullah and W.H. Auden are the most remarkable poets in their country. The poem ‘The Unknown Citizen’ by W.H.Auden and ‘Ashroy’ by

Rudra Mohammad Shaidullah deals with the different perspectives of modern existence of human beings. Both poems talk about the numbness and the inner vacuum of modern people's existence but not in a parallel way. The conclusion, or the ultimate image of these poems, metaphorically indicates the moral decline of human existence and the essence of alienation from society. And that position of alienation or self-exile triggers the concept of social death. Modern society and its practice are the center point of these poems and the poets followed their own style, use of symbols and tone, to express the journey of a socially dead person.

Rudra Mohammad Shahidullah and W.H. Auden represent different culture and society, yet they have some similarity, because in their poems, some common emotions regarding human existence were portrayed in a similar way. And that is the reason that the term social death, metaphorically yet strongly present in their poems. W.H. Auden's poem "The Unknown Citizen" and Rudra Mohammad Sahidulla's poem "Ashroy", have comparably shared the concept of social death, following the path of alienation, voluntary exile, self-identity and social slavery.

"The Unknown Citizen" is a satirical elegy, written to find the real personality of a person who has recently died. Mustafa Talib Jawad says in his article " This life, the poem implicitly critiques the standardization of modern life, suggesting that people risk losing sight of what it means to be an individual when they focus exclusively on the same status symbols and markers of achievement (like having the right job, the right number of kids, the right car and so forth)."

On the other hand, the poem "Ashroy" deals with more abstract aspects of human emotion. This poem tells the tale of a lover, who is tired of so-called success and achievement, now he/she wants to be his/her own self by keeping aside all the artificial glory, success and identity of modern life. In this poem, through dramatic monolog, a person is searching a place or a person, where he/she will be able to show and confront his/ her own emotional identity as human being.

Literature Review:

Several English studies have been accomplished about the poem 'The Unknown Citizen'. The critics and researchers have been writing about the poem from different perspectives. For instance, Das evaluated human identity in Auden's poem. 'identity is quite important for individuals, to avoid losing identity, one needs to free himself from the practice of taking for granted whatever is taught by the society; when one succeeds in an attempt like this, one tastes real freedom; he is then ready to construct the meaning of the world, though that meaning is purely subjective.' (Das 47)

MARX & FREDERICK claims that, ‘Auden has condemned the huge social discrepancy between the high class and the lower class society, which also led to the dark conditions of the modern man during the first half of the 20th century’ (41).

Poudel explains the role of modern citizens. “‘The Unknown Citizen’ plays on the panoptic gaze and the use of biopower of modern states over their citizens, showing what their true faces are.’(Poudel 254).

In the analysis of the theme entitled *Thematic Analysis of W.H. Auden's "The Unknown Citizen"* by Mulage, Chanabasappa Sidramappa, the writer found that modern humans are valued according to the commercial, economic, and ideological interests of groups that have strong influence on society. The identity of the unknown citizen was determined by those aspects, he was denied; his freedom and his life for others. And at the end, he lost everything and became nobody. (Mulage 4)

Researchers and critics wrote studies about ‘The Unknown Citizen’, considering various aspects, but it is difficult to find critics who have written about this particular poem of Rudra Mohammad Shahidullah .

The main aim of the study is to compare between the images of alienation, the concept of modern people, modern slavery, voluntary exile and the concept of social death. Both poems conclude with a thought that whether life is a mere living or being alive is the main essence of life?

Modern Life and its Dilemma:

The Human race has witnessed the rising of capitalistic society and the gradual change of some basic observations of life. Human being’s evaluation about life as a whole is really important for their ideology, behavior, and most importantly, their social existence as a human.

Searching for meaning and authenticity of life is another part of modern existence of human. It has been noticed that, capitalism as a system has a vast influence on human’s social existence and literary thoughts. The system revolves around the thought that money (a materialistic thing) can do anything, it can buy happiness. The emphasis on materialistic achievements and the concept that happiness (though it is an abstract term) is connected with the amount of money have changed the outlook of life’s ideology as a whole.

So the ultimate goal of a person of the modern era is to achieve all the elements of happiness, and those elements are connected with the fulfillment of concrete or

materialistic urges. The irony here is that, modern man invests materialistic things like money, to achieve abstract things like peace, happiness and success. The modern concept of happiness is also connected with the concept of success. Modern century is revolving around the strong but never satisfying urge to become happy and successful through materialistic investments. But this Capitalistic system will never allow someone to become satisfied because to continue the system of Capitalism, it needs to maintain the loop of making someone unsatisfied and intrigue them to go towards a process where they can never end the journey of achieving peace and happiness in a satisfactory way.

In modern times, the concept of social identity and self-identity automatically follows the capitalistic loop of thought that a human's existence and identity depend on his 'success' and that success is materialistic achievement. Modern money-oriented society observes the length of a person's success on the scale of materialistic achievement but not a human's real existence. The real identity or existence of human is connected with their flows, limitations and emotional connection with another person.

The article "Modern Dilemma in the Literary Works of T.S. Eliot." deals with the term modern dilemma. '(..)' themes exploring the nature of nothingness, the certainty of death, and the lack of fulfillment in life, are what could be coined as the "modern dilemma". Eliot explores these themes and ideas extensively in his work, specifically in "The Love Song of J. Alfred Prufrock" and "The Waste Land". Eliot's fascination with the modern dilemma—searching for meaning and authenticity in a hellish existence—is evident in "The Love Song of J. Alfred Prufrock" and "The Waste Land." (**"Modern Dilemma in the Literary Works of T.S. Eliot."**)

Here comes the dilemma between the self-identity of a person as an emotional being and materialistic or robotic human existence. Rudra Mohammad Shahidullah and W.H. Auden in their poems 'Ashroy' and 'The Unknown Citizen' have portrayed the image of this kind of human being and the very tragedy of modern existence. Their social existence has become kind of an exile for them; they cannot deny living the systematic social life like a robot but in reality, silently scream for the life of ultimate freedom as a human being. They exist like slaves in society and want to have freedom but are unable to break the shackle of modern existence.

They exist like aliens. And here comes the concept of self-exile or voluntary exile or alienation. 'Karl Marx reinvigorated it in his Paris Manuscripts in 1844; by raising his theory that alienation is a byproduct of capitalism, 'concerning both social estrangement and depersonalization' (Seeman 291).

The article “A history of alienation” tells that, “in the twentieth century, the word alienation has been broadly studied and used in social sciences and literature. The term was taken to define the fundamental pathology of modern life”.(Jay)

Rudra Muhammad Shahidullah, his poetry and representation of modern society:

Rudra Muhammad Shahidullah is one of the leading poets of Bangladesh. His poetry was remarkable for its lyrical beauty and revolutionary thought. He was also one of the major romantic, rebellious and modern poets of Bengali Literature. His voice was a strong protest against oppression and injustice. Romanticism and modernity equally dominated his poem. After Bangladesh won its independence, Rudra became one of the luminary poets of Bengali literature. He was almost a cult figure at that time. He was born on October 16 of 1956 in Barishal and died at the age of only 34 on June 21 in 1991. Criticism about the poetry of Rudra Mohammad Shahidulla is rarely found.

In his poem ‘Ashroy’, Rudra portrays a person’s concept of an ultimate place for peaceful existence. The poem deals with the thoughts regarding human freedom and the reality of the modern era. The title of the poem is "Ashroy", and the meaning of this Bengali word cannot be clearly translated and expressed with just one English word "shelter". The exact meaning of this word can be vastly explained through the images expressed in this poem. The poem subjectively shows the process of alienation, losing real identity and becoming a part of social slavery.

The poem dwells on the thought of the ultimate human struggle for peace, real love, sympathy and home. The poem also indicates the idea of the psychological concept of home. This poem is about just another nameless face in the modern world who is talking to his beloved, expressing his desire of keeping aside his success, so-called happiness and achievements.

These lines are from Rudra Mohammad Shahidulla’s poem, ‘Ashroy’

"তোমার করতলের পরে ক্লান্তিটুকু রাখি

রাখি আমার অক্ষমতাগুলো”

"Let me keep my tiredness on your palm,

And my precious depressions”

(Translated by the author)

Society expects him to be successful and achieve materialistic goals, but he is tired of all the materialistic achievements and now he wants to reveal his reality. This person wants to explore, share and accept his identity as a person who has his own failures, depression and imperfections. He wants to be an emotional and sensitive kind of person. He wants people around him to accept not just his success but his failures also. The poet says,

‘তুমি আমার ক্লান্তিমাখা ব্যর্থতাটুকু রাখো,

‘Please keep my failure which is folded with mere tiredness’

(Translated by the author)

This one-sided acceptance of modern society makes him incomplete and he feels like a caged bird who is not allowed to have his weakness and emotions. This emotion is closer to the very feeling of being a slave of a society.

‘ওরা সবাই শস্যকণা নেবে,
তুমি আমার লাঙল-চেরা মৃত্তিকাকে রেখো,

‘World wants the grain

You please adore my soil that is ploughed and bruised’

(Translated by the author)

Modern time only focuses on the ultimate achievements, the market price of everything, but it never admires the brutal and painful path of emotions, disappointments, brutality and failure to achieve the goal. To realize the value of light a person needs to go through the ultimate darkness and that journey towards darkness is also a part of his identity. So, if someone just asks for the poet’s enlightened part and is unable to accept his darkness then that person is not actually considering the poet’s real identity as a human being. Humans become humans with negative and positive sides.

‘আমার গৌরবের সাথি নিখিল জুড়ে আছে,
ব্যর্থ রাতে গ্লানির সাথি তুমি —
তোমার প্রিয় ছায়ার তলে ক্লান্তিটুকু রাখি, রাখি আমার বিষন্নতাগুলো,

‘I can have mates when I am successful.

You are my precious companion who knows my darkest night,
my exhaustion after failure.

Let me keep my weariness and pain under your peaceful shadow’

(Translated by the author)

Here Rudra is using the powerful juxtaposition of light and darkness as the whole dimension of a person. His poem acts as the spectacle, through which the reader can have the image of the human's dilemma of self-existence. It is not similar to Friedrich Nietzsche's concept of "nothingness". But it is a kind of detachment from the so-called modern life and the urge to attach with the real emotional human life.

Materialistic achievement and the rat race for being successful is the key concept of modern slavery. This poem shows how a person is striving for self-identity in a modern society and how human's social existence has become absolutely materialistic and unsympathetic in modern life. This person in this poem is an example of self-exile and the alienation of a person. This distraction from society and the people will gradually make him a person who is emotionally and socially dead.

W. H. Auden's poem , the complex relation of a person and society:

W.H. Auden's poem 'The Unknown Citizen' is one of the most influential compositions considered an artifact of history. The piece is a satire on capitalism. It was written in 1939 and covers the influence of industrial and the modern era.

The title of the poem actually tells the whole story. The person, who doesn't have any name, is known as Unknown Citizen. This title reveals the crisis of self-identity, the pattern of alienation and the state of self-exile in the modern era. This Unknown Citizen is just another nameless face in the modern world.

The poem reveals the fact that this Unknown Citizen is just another number, and not a breathing human being. Auden shows that such careful dehumanization is a process where a person gradually departs from his/her real self. Lack of individuality makes a person an unthinking robot. Auden, with his poetic skill made this poem a satiric irony with biting sarcasm.

Article "Irony in W. H. Auden's Poem "The Unknown Citizen" discusses that, 'it contains such twisted layers of meaning in a single expression: the denotation (what is actually said) and the connotation (what is meant) are different. Masterful in his use of such irony, Auden loads his poem "The Unknown Citizen" with biting, bitter, sarcastic, and accusatory double meaning—to poke fun at the automaton-like modern existence of human beings without any sense of freedom or individuality. The poem is a satire on the "programmed" existence of a modern factory worker.' (Kim 5)

'The poem ends on a final, rhyming couplet that takes a big detour from the conventional topics that have occupied the speaker so far. Now he asks two questions

saying "Was he free? Was he happy?" that really do seem interesting.' (Jawad 2444-2447)

This concluding line is the ultimate ironic and at the same time satirical line of this poem. The modern era has forced us to be perfect, to be successful, to be ideal citizens but it has not raised the most important question; whether we are free or having our true self or not. And that creates a situation of self-isolation and socially detached human beings. These lines are powerfully ironic.

In the article 'Absurd Perspectives in W. H. Auden's *The Unknown Citizen* and Salah Abdel Sabour's *Winter Song*: Comparative study' Jawad tells that, 'The poet shows sharply the total regimentation of the lifestyle and the viewpoint in an urban, artificial community. The individual man is found to have lost here his personal entity and inclination and become a mere number in the all-pervasive social existence. He is to conform to the set patterns, whatever those may be, for any deviation from the same is liable to be discredited as abnormally and eccentricity this is a situation, highly ironical yet tinged with pathos.'

This poem has some aspects which must be understood as organic parts of a complex totality. A person deprived of his Self-identity will go towards the path of alienation and self-exile. Auden indirectly mentioned the difference between alive and dead people. Being dead is not always connected with physical death. Indirectly but in a bold way, Auden mentioned the idea of social death in his poem.

Social death as the conclusion of Auden and Rudra's poetry:

Modern thought, capitalism, globalization-- all these facts trigger master-slave relation in society. Prominent philosopher Hegel mentioned this term. Master-slave relation indicates the condition of modern slavery and this is the fact that connects social death with modern slavery.

Orlando Patterson, in his book *Slavery and Social Death: A Comparative Study*, discussed the term Social Death. Heinz Heinen wrote a review of this book and he mentioned that 'Patterson's research is about slavery as a social fact and about freedom'. Social death is the condition of people not accepted as fully human by wider society. It refers to the situation, where someone is treated as if he/she is dead or non-existent.(Heinen 263-268)

"Patterson's most famous contribution concerns the argument that the concept of property is insufficient to define slavery; he has instead proposed the concept of social

death, defined as a composite of violence, natal alienation and dishonor.”(Vlassopoulos 319)

This paper shows that Rudra Muhammad Shahidullah and W.H.Auden, in their poems, portrayed this kind of situation of modern human beings. They are living a systematic and so-called modern life but the reality is something different. They are the victims of a new type of slavery and social death.

The poem “The Unknown Citizen” and “Ashroy”, shows that modern humans do not live the life; they just pretend to live. Real human life will be full of emotions, errors, imperfections, love, sympathy, happiness and drawbacks. And that is the real essence of being human.

Humans want to live and they want to avoid death. This is a common phenomenon of mankind. But here, in modern era, life has become extremely artificial, that we can call it a mere exercise of living. It is not life, which is full of emotion, errors and joy for small things. In this modern life, humans become socially dead and they live life like a shadow.

Here is the connection between the poems “The Unknown Citizen” and “Ashroy”. Both of these poems deal with the pessimistic tone of the central character, the journey of alienation, principles of being a social slave, living the life in a voluntary exile and ultimately losing the real identity as human. These poems track the whole journey of a modern human that ends in social death.

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A Neocolonialist Take on Amitav Ghosh's *The Shadow Lines* & E.M. Forster's *A Passage to India*

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Abstract: The article discusses the zealous idea of nationalism in *A Passage to India* and *The Shadow Lines* that can rewrite colonialism in a new mask. Thorough study has been done to analyze the ambivalent situations on the characters from the novels that have been through colonialism and partition. The researcher discusses the struggles of crossing the arbitrariness of borders and influence of cultural diversity in the light of the aforementioned novels from a neocolonialist view. Both of the novels depict the same aftermath of colonialism and struggle to identify themselves in the hazy idea of 'nation' which often ended up in homogenizing a heterogeneous community. Although, both of the novel is set in separate time zones- colonialism and after independence, the effect can be summed up from a neocolonialist perspective. That is why, infusing the idea of Edward Said's orientalism, Fanon's pitfalls of colonialism and Bhabha's third space, the paper discusses how people carry the hegemonic idea of nationalism especially about the minorities in the society. The article is conducted using a qualitative research with textual analysis to support the argument of the study. It's been found that the idea of nationalism- exclusion, othering and aggression, might create the spirit of independence but also lessens the tolerance. As a result, a neocolonial hybrid state emerges that often dehumanizes the minorities just how as some countries of the West treated the nonwhite people.

Keywords: nationalism, identity, orientalism, postcolonialism, neocolonialism

Introduction.

In *Critical Theory Today*, Lois Tyson defines nationalism as "the emphasis on indigenous culture, especially when accompanied by the attempt to eliminate Western influences" (Tyson 278). While this may initially seem like a liberating act of resistance, such nationalism often inherits the very tools of domination it seeks to escape. Meaning, in the process, the attempt to regain freedom got contaminated with colonial hangovers and natives started imitating the proponents of power politics among themselves and the rests. Edward Morgan Forster and Amitav Gosh, two prominent writers explore the idea of nationalism in their respective works: *A Passage to India* and *The Shadow Lines*. The main focus of the study is to explore the negative

impact of nationalism on the individual through these two different novels from a neocolonialist eye.

Originally coined by Kwame Nkrumah, neocolonialism refers to the continued economic, cultural, and ideological domination of former colonies by their colonizers, often through indirect means. In literary terms, it also manifests in how postcolonial societies reproduce colonial structures of power, especially through state-sponsored nationalism that marginalizes internal “others.” This paper uses the term “neocolonial othering” to describe how characters like Tha'mma and Aziz, while rejecting foreign domination, inadvertently perpetuate colonial hierarchies within their own societies.

Background of the study

Nationalism tends to take several terms according to different scholars. Many scholars point it out as a negative aspect- “exclusionary hegemonic orientation of nationalism” (Hobsbawm). According to him, resistance towards colonial rules of the ‘third world country’ influenced the idea of nationalism. Frantz Fanon (1961) agrees with the statement adding that the idea of the ‘nation’ as the imagined basis of this post-independence construction of culture and identity became an extricable part of the rhetoric of nationalism. In the postcolonial world, after the independence from colonial rule, with the emergence of nationalism came communal riots, partition, diaspora, and finally the ambivalence in claiming one’s national identity.

In *Passage to India*, two different cultures were living side by side with a superior-inferior relationship due to colonial period. There were internal problems from the beginning but not getting enough attention. Everything went out of hands when Dr. Aziz was blamed for the rape of another British woman, Adela. The place was flooded with communal riots between Hindu-Muslims. Aziz lost reputation and interest in making friends with the colonizers. In the end, he expresses that unless the relationship of colonizer-colonized is mitigated, no transcultural friendship can be made.

In *The Shadow Lines*, the identity crisis after the partition of India is highlighted through many memories and communal riots. Ghosh criticizes the drawing of imaginary borders in the name of religion and nation and promotes the idea of a borderless universe.

Statement of the problem

Though nationalism is a key element for the colonized countries to gain independence, it has its darkness. It limits the worldview of a person to a certain boundary called ‘nation’ and as a result, he or she rejects any interference of the ‘other’. The main focus of the study is to explore this issue through two different novels: *The Shadow Lines* by Amitav Ghosh and *A Passage to India* by EM Forster. The study also explores the impact of diaspora and ambivalence in the light of these two novels on a neocolonial perspective.

Theoretical Framework

Palestinian-American scholar, Edward Said in his book, *Orientalism* (1978) talked about the dark relationship between the Orient and Occident. He said, “The relationship between Occident and Orient is a relationship of power, of domination, of varying degrees of a complex hegemony...” (Said, 5). At first, a few westerners saw the East as a career but later it was veiled by the idea that they (non-Europeans) are the savage, uncivilized person and it was the ‘white men’s burden’ to educate them both culturally and religiously. And, that is how a settlement sprouts into violent colonial rule- it starts small.

Also, they preached that these heathens cannot represent themselves, they must be represented. In the process of this ‘generous attempt’ many scholars and historians have committed epistemological violence and generalized everyone in one scale. For example, Flaubert once met an Egyptian courtesan during his travels in Egypt between 1849 and 1851 and later described all oriental women are exactly like that in *Flaubert in Egypt: A Sensibility on Tour*. That is how they dehumanized the humans of half of the world and treated them as concept in books rather than really getting to know them, their culture and religion. “Anwar Malek Abdel (1963) calls the ‘hegemonism of possessing minorities’ and anthropocentrism allied with Europocentrism: a white middle-class Westerner believes it his human prerogative not only to manage the nonwhite world but also to own it, just because by definition ‘it’ is not quite as human as ‘we’ are.” In his *Orientalism in Crisis*, we see these kinds of direct portrayal in *A Passage to India* between the communities of Anglo-Indians and natives regardless of the class. Now, the paper’s different take is on the society of *Shadow Lines* where people from different religion or even different country are seen as the non-human other, the inferior, and the burden. Under the veil of nationalism, Tha’mma from SL and the conservatives are practicing neocolonial ideas; can be called ‘neocolonial othering’.

Another very promising psycho-analyst, Franz Fanon described the influence of colonial manipulation on the minds of both colonizers and colonized parties. His research says that both parties go through psychological turmoil while one thinks himself as the superior and the other inferior. Then after the decolonization process, when there is no visible ‘oppressor’ present, the oppressed people starts out casting their own people with the intention of promoting a homogenous culture and often the process includes bloodshed and injustice. “The national bourgeoisie steps into the shoes of the former European rulers... and turns its back on the people” (Fanon 97). Even Fanon himself warned of the outcome of the zealous nationalism when it turns to xenophobia and militarism. Symbolically, Tha’mma could be a microcosm of the disadvantages of nationalism- bloodshed, militarism, nihilism and the intolerance towards heterogeneous identity. We can see the same in Dr. Aziz while he actively denounces the friendship of Mr. Fielding indirectly pointing out the power structure and race as the obstacle between them.

With the superior-inferior complex between the oppressed and oppressors, comes the idea of imitating the supposed superior race which according to Bhabha is called mimicry. "Mimicry is at once resemblance and menace" (Bhabha 86). The reason behind calling it a 'menace' could be discussed as the disadvantages of blindly following the adopted culture with the sense of erasing one's root for the sake of shame and social mobility. Because research shows in this postcolonial era, heterogeneous cultural identity is quite common but it issues a threat when one tends to erase another culture. That is why Bhabha suggested a place where this hybrid culture can exist in a safe place and called it the 'third space'. "The 'Third Space' is a mode of articulation... which opens up a space of translation" (Bhabha 37). This was the space that Ila from the SL and the Muslim and Anglo- Indian community were searching for to co-exist with dual yet fluid cultural identity.

Alongside Edward Said's notion of Orientalism, this paper employs Frantz Fanon's critique of post-independence nationalism and Homi Bhabha's theories of hybridity and mimicry. Fanon, in *The Wretched of the Earth*, warns that nationalist movements often reproduce colonial hierarchies, as seen in the way Tha'mma and Aziz enact exclusionary politics mirroring their former oppressors. Homi Bhabha's concept of ambivalence and the Third Space adds further depth: characters like Tridib and Fielding navigate between identities, destabilizing fixed notions of nation and culture. Together, these frameworks reveal how colonial ideologies persist in neocolonial forms—both externally imposed and internally perpetuated.

Literature review

Nandan (1994) focuses on the development of political and nationalist consciousness in Aziz. She states, "The development of political consciousness in Aziz and within India, in general, is displayed in the fact that their tolerance of the English, even their desire for their presence, later hardens into a political awareness and a desire for their departure." According to Nandan, although Aziz wants Fielding to leave India, he still feels some affection for him, which characterizes the triumph of liberal humanism.

Baker (2006) highlights the problematic relationship between the colonizer and the colonized in a colonial context. He observes that the English and Indians can attempt friendship, but cultural differences, stereotyping, and colonization obstruct true solidarity. "No native can escape his nativity and no white man can escape his white blood" (Baker 73).

Homi Bhabha (1994) adds nuance through his concepts of ambivalence and mimicry, noting that mimicry is "at once resemblance and menace," revealing how colonial authority is both imitated and destabilized by the colonized subject (86). This is visible

in *A Passage to India*, where Aziz's oscillation between loyalty and rejection reflects colonial ambivalence. Bhabha also defines postcolonial identity as hybrid, stating that in the "Third Space," identity is "not pre-given, progressive or whole, but divided by otherness within itself, and always in a state of ambivalence" (37). Tridib and Ila from *The Shadow Lines* embody this hybridity, belonging nowhere yet navigating everywhere.

Rituparna Roy (2010) writes that Tridib's death "indicates that the aftermath of the Partition did not die down even after seventeen years... it highlights the destructive energies of the religious fundamentalism" (Roy 131). The implication is that nationalist trauma continues across generations, even in the postcolonial period, as communal violence emerges not from colonizers but from within.

Kasikhan and Kasikhan (2015) argue that Ghosh emphasizes nationalism to reveal that "the shadow lines we draw among ourselves, people and nations, is not only an absurd illusion, but also can be a source of bloody violence." These boundaries manipulate both private and political spaces and illustrate the struggle to overcome artificial borders (Kasikhan and Kasikhan 249).

Edward Said (1984) reflects on the trauma of homeland reconstruction: "Their roots, their past, home becomes the traumatic site of cultural reconstruction which involves a conflict with many inherited assumptions, including the overriding premise that the home always-already exists" (Said 53). This is evident in Tha'mma's deep disillusionment when she returns to Dhaka, finding her childhood home transformed beyond recognition.

Gabriel (1999) contends that Ghosh "uses the fractures and dislocations of partition to destabilize a continuist narrative of nationalist history and to uncover the silences and omissions upon which the nations of India and Bangladesh have been created" (Gabriel 210). Her insights align with how *The Shadow Lines* challenges the sanctity of state borders and histories.

Jebun Ara Geeti (2024) provides a comparative approach to Ghosh's reception, noting how the novel's nationalist themes are interpreted differently across India, the UK, the US, and Australia. She writes, "Partition, traumatic memories of dislocation, and a profound longing for the past are assessed differently... depending on the critic's national context" (Geeti 8600). This global reception enriches the novel's significance and reinforces how nationalism is not a fixed idea but shaped by lived, cultural memories.

Sheikh Zobaer (2020) reinforces this with a historical lens, stating that *The Shadow Lines* not only portrays partition trauma but also “captures the rise of Indian nationalism and the struggle against the British colonial rule through revolutionary movements” (Zobaer 157). Thamma’s fascination with violent nationalism reflects this historical spirit.

Amitav Ghosh himself declares, “all the boundaries are artificial: there is no such thing as a ‘natural’ nation, which has journeyed through history with its boundaries and ethnic composition intact” (*The Shadow Lines* 1988). This assertion frames both novels’ critique of nationalist absolutism.

The themes of nationalism, colonial ambivalence, and identity are extensively explored in *A Passage to India* and *The Shadow Lines* by existing studies. But these analyses are basically done separately. Either by looking at Ghosh’s reflection on postcolonial and partition trauma or Forster’s critique of British imperialism. While Roy (2010), Kasikhan and Kasikhan (2015), and Gabriel (1999) concentrate on Ghosh’s examination of postcolonial nationalism and border politics, Nandan (1994), Baker (2006), and Bhabha (1994) draw attention to the colonial dynamics and ideological divisions within Forster’s work. The way that both texts, when compared, show a cyclical pattern in which the newly independents internalize the hang of colonialism and uphold the same exclusionary traits they opposed during colonial rule. Additionally, although hybridity and the instability of identity are frequently highlighted in postcolonial criticism, both the text closes the gap in their timelines and explain how colonial resistance turns into inbred power dynamics and hierarchy after decolonization opening up scopes for neocolonial ideologies.

Indeed, the literature reviewed so far has independently explored nationalism in *A Passage to India* and *The Shadow Lines*, but rarely through a comparative lens. This study intends to bridge that gap, showing how extreme forms of nationalism, once used to resist imperial rule, is later adopted by natives to oppress others. Literature, echoing life, reveals that the oppressive ideologies once resisted may be internalized and re-performed by the formerly oppressed.

Methodology

Research Design, This study follows a qualitative research method, using literary analysis as its main approach. By combining close textual analysis, the research involves close reading of the texts, focusing on language, characters, and narrative structure to understand how the authors represent historical and cultural issues.

Primary Data Source, It examines two novels—*A Passage to India* (1924) by E.M. Forster and *The Shadow Lines* (1988) by Amitav Ghosh—arranged in chronological

order. These texts serve as the primary sources of data and will be analyzed to explore themes such as identity, nationalism, and colonial/postcolonial relationships.

Secondary Data Source, to support the analysis, secondary data will be collected from books, academic journal articles, theses, documents, and reliable websites. These sources will help provide context and strengthen the interpretations made from the primary texts.

Theoretical Framework, works of some of the most prominent postcolonial thinkers and critics, including Edward Said, Frantz Fanon, and Homi K. Bhabha, have been used to lay the theoretical foundation of the study.

Objectives

The objectives of the paper is to-

1. analyze the nationalistic stand of the characters from *A Passage to India* and *The Shadow Lines* who faced partition and diaspora from a neocolonialist perspective
2. discuss how the idea western idea of 'orient' has corrupted the decolonized countries as well.

Influence of nationalism, diaspora and ambivalence in *The Shadow Lines*

Before colonization, there were both fluidity and complexity among different communities and cultures. Still, the people of India lived contently with heterogeneous history and culture with the extraordinary capacity to live with differences. But after the independence from British colonizers, they tend to draw borders based on religious fundamentalism. Hence, the communal riots, migration, variation in national identity and belongings, ambivalence in identity, and relationships created.

Characters' nationalistic frenzy, from the very beginning, Tha'mma's character- an eccentric literate strong widowed woman who is also the narrator's grandmother, was a little bit strict and eccentric. She needed everything under [her] control and sorted. Her eccentricity is influenced more for her trauma, insecurity, and financial problems after her husband's death. The arbitrariness of identity and borders was never clear to her. She asks whether she would be able to see the trenches from the plane. But she was startled when learned that there is no big hint of the border between two countries.

"But if there aren't any trenches or anything, how are people to know? I mean, where's the difference then? And if there's no difference both sides will be the same; it'll be just like it used to be before, when we used to catch a train in

Dhaka and get off in Calcutta the next day without anybody stopping us.”
(Ghosh, 1988, P, 149)

She unintentionally describes the meaningless of the India-Pakistan border. But she always supported the idea of ‘cultural homogeneity’ in her own way incorporating herself as Indians and othering the refugees. Her idea of exclusionary nationalism got more frenzy after the death of Tridib. It attacked more personally for the death of the nearest ones. She sold the last souvenir of her dead husband, a gold chain in the hope to revenge for the Tridib’s death. She says that whatever it takes, they need to kill all of them (the Pakistanis) in the border, or else they’ll come to kill her and her family (Ghosh, 1988, P, 237).

In this way thousand separate trauma[s] build into one, thousand tha’mmas personal plea for revenge took part in communal riots in the name of nationalism.

On the contrary, Ila’s journey of cosmopolitanism got disrupted with her thoughts on Eurocentric superiority. She says, “nothing really important ever happens...in Nigeria, India, Malaysia, whatever.” (Ghosh, 1988, P, 104) By this, she rejected her native land and cultural values. In this way, both Tha’mma and Ila are the same. They rejected every other views and culture that seemed unrelated to them.

Ambivalence in the sense of identity and belonging, in Tha’mma’s childhood, she used to make stories to pacify her little sister telling that in the separate portion of their house, everything is upside-down. It is the microcosm of what the people who are divided by borders think. They think there are ‘separate realities’ on the other side even if they were the same before division. That Tha’mma who was brought up in Dhaka, criticize the refugees came from East Pakistan.

“Tha’mma: look at it (Calcutta) now- as filthy as Babui’s nest. It’s all because of the refugees, flooding in like that.

Narrator’s father: Just like we did.

Tha’mma: we’re not refugees. We came long before the partition.” (Ghosh, 1988, p. 145)

The difference between national identity and homeland strikes again when Tha’mma was about to visit Dhaka. The binary logic of coming and going seemed so ambivalent that she couldn’t fix whether to say- going to Dhaka or coming to Dhaka.

Diaspora and partition and idea of home, “I don’t believe in this India-Shindia . . . Suppose when you get there, they decide to draw another line somewhere? What will you do then? No one will have you anywhere. As for me, I was born here, and I’ll die here.” (Ghosh, 1988, p. 237). Coincidentally, Jethamoshai’s statement proved prophetically later. Another country, Bangladesh emerged from that border. He, in his frenzy, could understand border can be drawn but there is no stability or wholeness in

this man-made problem. Upon the sense of freedom, partition, diaspora, nationalism was born in the postcolonial world. That's why nationalism is different in India than the West.

To Tha'mma idea of home is Calcutta but something dawns on her when she cannot say her homeland is her identity. To Ila, it is the Europe she claims her homeland rejecting her root. But Tridib wanted to be a cosmopolitan and that thought of universality, he supplied to the narrator's worldview.

Diaspora and the idea of Nationalism in *A Passage to India*

"We'er not here for the purpose of behaving pleasantly!

What do you mean?

We'er out here to do justice and keep the peace. Them's my sentiment.

India isn't a drawing room." (Forster, 1924, p. 49).

Ronny's speech with his mother clearly reveals that Anglo-Indians are the part of British nationality. They came here to serve their British Government, not to sympathize with the natives. The Anthem of the Army of Occupation from chapter 3 reminded them of their national identity. Such nationalistic attitude of Anglo-Indians broadens the gap between the natives and themselves.

On the other hand, Mrs. Moore is against this attitude. She thinks that India is a part of the earth. So Anglo-Indians and the natives should be pleasant to each other. This liberal attitude of Mrs. Moore makes her criticize her fellow country woman in front of Aziz. Nationalism did not blur her sense of judgment. She becomes a good friend of Aziz.

Ambivalence in the attitude of Fielding, like Mrs. Moore, Fielding is also a good friend of Aziz. To defend his friend, Fielding goes against his fellow countrymen. It is certain that Fielding cares for Aziz but he did not think Aziz as his equal. He thinks that India cannot be a nation. British government need to patronize India: "Away from us, Indians go to sand at once" (Forster, 1924, p. 349) it proves that Fielding has a superior feeling regarding his British nationality. Friendship should be based on equality. But in Fielding's case, he tries to patronize Aziz. His nationalistic pride creates a barrier between him and Aziz.

Extreme Nationalism of Aziz, it is not only Fielding but also Aziz whose nationalistic pride prevents the possibility of friendship between him and Fielding. Due to some bitter experiences like the mistreatment of Major Callender, negligence of English ladies and finally the false accusation from Adela's part make him despise the Anglo-Indians. He comes to the conclusion that "two nations cannot be friends." The spirit of nationalism lessens his tolerance towards the Anglo-Indians. He wants a nation state which will exclude all the foreigners. His harsh remark towards Fielding proves

nationalistic frenzy: “We shall get rid of you, yes, we shall drive every blasted English man into the sea and then...you and I shall be friends.” (Forster, 1924, p. 289)

Findings

It can be said that not inferiority complex or identity crisis- but the emergence of a cosmopolitan self where one's identity cannot be specified by a separate name; rather it promotes the polarization of different cultures in one is the ultimate answer in both of the novels.

Seeing Tamil and Telegu as one, antagonizing Islamic cultures and Islamic Orientals are racist and dehumanizing. The white men's ideology was not appropriate as they dehumanized and marked the 'other' slightly different than them. That is why colonialism and their rule is remembered as corrupted. So, repetition of the same idea in a new mask is also not a humane thing to do.

One of the central findings of this study is that both Tha'mma in *The Shadow Lines* and Aziz in *A Passage to India*, while resisting colonial oppression, gradually begin to embody the very ideologies they oppose. Their nationalism, initially rooted in the desire for freedom, slowly adopts a rigid and exclusionary form—mirroring the colonial mindset of division and dominance. Aziz's vision of a nation for “Indians only” and Tha'mma's obsession with boundaries reveal how colonial binaries are internalized and repurposed in postcolonial struggles. Forster, through characters like Aziz, foreshadows how early nationalist sentiments can evolve into systems of neocolonial control, where exclusion is practiced by the formerly excluded. Moreover, the continued presence of hierarchical institutions—represented by characters like Ronny and Callendar—suggests that even after the colonizers depart, the structures of power remain, often managed by the native elite. This raises a deeply human question: can the pursuit of liberation itself become a new form of control when it forgets the humanity it once sought to reclaim?

Scopes and Limitations

Now that the paper proved that othering is not a concept followed by some white foreigners and their administrations, natives from the same country can 'other' anybody based on Cultural diversity, race, class, gender, there's scope to create and research several branches of neocolonial othering. Also, the new studies can transcend from post-colonial to marxism, feminism etc.

As the research talks about people and experiences, a quantitative research could've been done to justify the concept, 'neocolonial othering'. But due to time proper funding constraints, the researcher could fulfill these demands.

Conclusion

The goal should be humanizing the idea of nationalism rather than taking political advantages from it. Otherwise, national will promote negativity and the current world is the witness of it. That is why communal riots, wars, etc., are happening. To serve its political agenda, common people are losing their lives, dearest ones, friendships, kinships, childhood houses. Ghosh rejects the homogeneous cultural identity and promotes fluidity by disrupting the so-called nationalist ideas. He also influences the idea that after colonialism, the world has moved on and “home and the world as collaborative rather than competing” (Geeti, 2024, p. 5); whereas, Forster indicates that intermingling of cultures will never happen if oppression and superiority is present. Both texts talk about the feelings of common people but the context is different. Ultimately, these two novels remind us that the battle against colonialism does not end with the departure of the colonizer—it continues within, in how we imagine borders, define belonging, and choose between domination and empathy in shaping our nations.

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Responsible Factors for Problems in Academic Writing: An Investigation on English Major BA Honors First Year Undergraduates

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Abstract: Academic writing is the most practiced skill to assess students' performance at almost every level of education. And this skill is largely associated with students' linguistic proficiency, which poses a significant challenge for EFL learners. Despite the compulsory inclusion of English as a subject in the curriculum of primary and secondary education in Bangladesh, many undergraduates face difficulties in academic writing because of some influential factors. Moreover, writing in English is crucial for the academic success of English-major BA honors first-year undergraduates. This research specifically examines these problems in academic writing and the responsible factors. A mixed-method approach is used, which includes a survey questionnaire, written samples, and semi-structured interviews for data collection. The findings from data analysis inform pedagogical approaches and support mechanisms that can significantly enhance EFL learners' academic writing skills and contribute to their overall success in higher education.

Keywords: Problems in academic writing, Responsible factors, Writing skills, EFL learning, Pedagogy

1. Introduction

Proficient academic writing skills play a crucial part in the constantly changing landscape of higher education. In this particular context, it is noteworthy that first-year undergraduate students pursuing a Bachelor of Arts degree in English with honors possess distinctive academic demands. As students advance in their academic pursuits, they find themselves confronted with increasingly challenging writing tasks which require higher levels of precision. That is why the proficiency in written communication is an essential factor contributing to their academic achievements and career prospects in the future.

The study of English language and literature at the undergraduate level, particularly within the BA honors program, holds multidimensional significance. In addition to possessing linguistic proficiency, individuals pursuing a degree in English are expected to actively and thoughtfully engage with literary and academic texts. They are also expected to undertake the tasks of evaluating, interpreting, and effectively expressing their ideas through well-organized essays. The stated process, which plays a key part in facilitating intellectual development, frequently presents notable difficulties for first-year undergraduate students who are unfamiliar with the expectations and conventions of English academic writing at university level. And there are some influential factors which cause these difficulties in academic writing.

1.1 Background of the Study

First-year undergraduate students typically experience a shift from the guided educational setting of secondary and higher secondary education to the more autonomous and analytical approach required at the university level. This transition, in conjunction with the distinct linguistic and academic requirements of the field of English studies, poses a unique set of challenges. In addition, the cultural and educational contexts of Bangladesh introduce further layers of complexity. The proficiency of students writing may be impacted by linguistic difficulties arising from English not being their primary language of communication.

Furthermore, there is a notable lack of focused investigation into the problems faced by English major BA honors first-year students in the context of Bangladesh. The particulars of their struggles, the factors responsible for these challenges, and the potential impact on their academic performance remain largely unexplored.

This background highlights the critical need for a targeted investigation into the academic writing issues faced by English major BA honors first-year undergraduates and the responsible factors. By understanding these problems and their underlying causes, educators, curriculum developers, and institutions can make well-informed decisions to enhance the academic writing support provided to these students. This study bridges this gap in understanding and contributes valuable insights to the field of academic writing in the specific context of Bangladesh's English major BA honors program.

1.2 Objectives of the Study

1.2.1 General Objective

The general objective of this study is to comprehensively examine and understand the responsible factors for problems in academic writing faced by English major BA honors first-year undergraduates. By addressing the broader goal of understanding these factors, the study contributes to the improvement of academic writing support and pedagogical strategies designed to meet the specific needs of these students.

1.2.2 Specific Objectives

The specific objectives of this study include a number of essential issues relating to problems in English academic writing. Firstly, to identify the specific difficulties in academic writing faced by English major BA honors first-year undergraduate students. Secondly, to investigate the factors which are responsible for these problems in English academic writing. And lastly, to explore how do they deal with these responsible factors to overcome their problems in academic writing.

Through these specific objectives, the study provides a comprehensive understanding of the problems, factors, and impacts related to academic writing faced by English major BA honors first-year undergraduates. The findings of this study have the potential to inform important pedagogical approaches and support mechanisms. These can significantly improve students' academic writing proficiency. These can also contribute to their overall success in higher education.

1.3 Research Questions

RQ 1. What are the major problems in academic writing faced by English major BA honors first-year undergraduates?

RQ 2. Which factors are responsible for these problems in academic writing?

RQ 3. How do the students deal with these responsible factors to overcome their problems in academic writing?

2. Academic Writing in English

2.1 Academic Writing in English

Academic writing is the specialized and formal style of writing used in educational and scholarly contexts. And, academic writing in English specifically refers to the practice of producing scholarly written works in the English language.

It is a vital skill for students, researchers, and academics worldwide, as English is the dominant language of academic communication. It includes a wide range of genres, from research papers and essays to thesis and dissertations, all following the conventions of academic discourse.

2.2 Academic Writing Process

The academic writing process typically consists of several interconnected stages. While the process may vary slightly from one writer to another, the following stages provide a foundational framework for understanding how academic papers are composed.

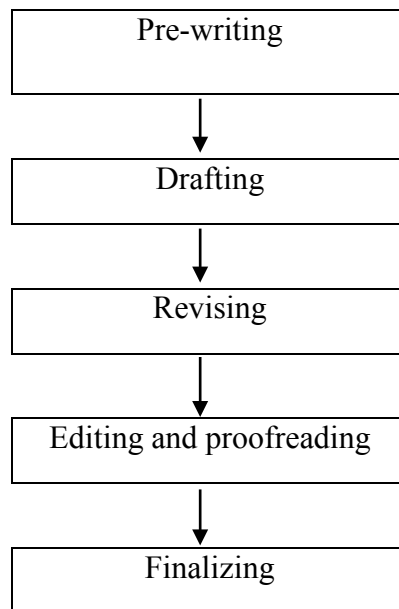


Figure 1: Stages of the Academic Writing Process

English major BA honors first-year undergraduate students often face specific challenges during different stages of the academic writing process.

2.3 Theoretical Framework

2.3.1 Academic Writing Theories

2.3.1.1 Cognitive Process Theory

According to the Cognitive Process Theory, proposed by Flower and Hayes (1998), the writing process begins with planning and goal setting. Writers establish their objectives and create a mental roadmap for their composition. Then, during the

text-generation phase, writers translate their ideas into written language. This involves making choices regarding language, structure, and content. Again, revision is a fundamental part of the writing process. Writers revisit their text, reevaluate their goals, and make changes to enhance clarity, coherence, and effectiveness. According to this theory, writers continually monitor their writing and gather feedback, both from themselves and external sources. This process informs further revisions and refinements.

2.3.1.2 Social Cognitive Theory

The Social Cognitive Theory by Bandura (1986) states that, individuals can acquire new behaviors and skills by observing others. In the context of academic writing, students may learn writing techniques and conventions by observing proficient writers or receiving feedback from peers and instructors. Again, this theory emphasizes the role of self-regulation in learning. Students can actively monitor and control their writing processes, setting goals, and adjusting their strategies as required. Moreover, self-efficacy, or one's belief in their ability to perform a task, plays a vital role in academic writing. Students with higher self-efficacy are more likely to persist in the face of writing challenges and deliver the effort required for improvement.

By integrating these academic writing theories into the framework, it is analyzed how first-year English major BA honors students in Bangladesh engage with the writing process. It is explored whether their challenges are rooted in the planning and goal-setting phase, the text-generation process, or issues related to self-regulation and self-efficacy. Moreover, Social Cognitive Theory highlights the significance of the learning environment and peer interactions, focusing on potential sources of support and improvement.

2.3.2 Genre Theory and Genre Based Approach in Academic Writing

A genre-based approach to writing instruction, derived from genre theory by scholars like Swales (1990) and Miller (1984), focuses on teaching students to recognize and produce texts that follow specific genre conventions. By analyzing and understanding the structure, language, and communicative purpose of genres, students can improve their academic writing skills.

In the context of the study, genre theory is applied to understand whether the challenges faced by English major BA honors first-year undergraduate students are related to a lack of genre awareness or an inability to follow the academic writing conventions. This perspective guides pedagogical suggestions designed to enhance genre awareness among these students.

2.4 Conceptual Framework of the Study

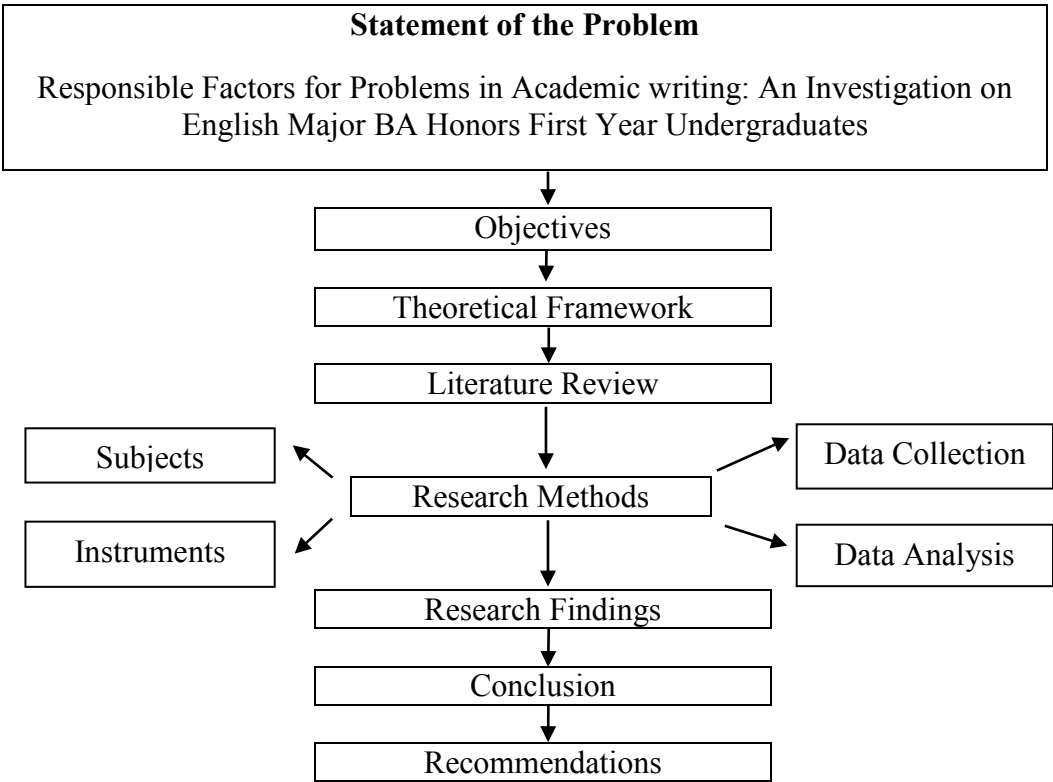


Figure 2: Conceptual Framework of the Study

3. Literature Review

3.1 Review of Previous Studies

According to Jin (2023), the most common challenges encountered by undergraduate students in a private institution in Malaysia in English academic writing were identified as logical organization and lexico-structural issues. This study identified five main reasons for the challenges encountered by the participants in their English academic writing efforts. These factors included a weak English language foundation, low proficiency in English, inadequate opportunities for English writing practice, the status of the English language within their respective home countries, and the impact of their native language.

Al-khasawneh and Maher's (2010) also found that participants with weak English foundations are affected by the status of the English language in their countries, as well as students' level of motivation towards English. The participants identified several factors leading to their problems in academic writing, including ELT techniques in their home countries, the medium of instruction, and a lack of opportunities for English writing practice.

As stated by Yuen and Mussa (2015), it can be concluded that the major factors contributing to challenges in academic writing include a lack of writing and reading practice as well as a shortage of comprehensive academic writing courses in their home nations. This implies a deficiency in their foundational knowledge of English writing.

Biswas (2021) noted that, students at the tertiary level encounter mostly mechanical grammatical issues as well as rhetorical grammatical challenges. However, in the context of Bangladesh, undergraduate students encounter multiple difficulties when it comes to adapting to a new academic setting. A significant proportion of undergraduate students originate from a Bengali medium educational background. So, it requires an immediate adjustment to acquiring proficiency in English writing upon admission to the university. At this academic level, students face considerable pressure to achieve fluency in the English language. Various socio-economic conditions, cultural backgrounds, diverse lifestyles, variations in education systems, and individual mindsets contribute to an increase in problems among students, which subsequently lead to difficulties in writing.

Afrin (2016) identified the major writing difficulties faced by undergraduate students who are not majoring in English at a private university situated in Bangladesh. The difficulty observed in non-English major students has been caused by factors such as grammatical weaknesses, insufficient practice, lack of motivation, and educational background.

Badi (2015) discussed several fundamental aspects that require careful attention when engaging in academic writing, particularly within an EFL setting. Sufficient familiarity with academic writing conventions, academic vocabulary and phrases, and proper grammar are crucial factors in producing a meaningful piece of writing (Abdulkareem, 2013). So, as stated by Tahaine (2010), academic writing should be regarded as a fundamental part of university programs, as students at this level require comprehensive writing skills to complete the assigned activities.

Al-Khasawneh (2010) explored the challenges encountered by Arab postgraduate students enrolled in the College of Business (COB) at the University Utara Malaysia (UUM) with regards to their academic writing abilities. The findings

of the study revealed that the students identified their difficulties in English with factors such as weak foundations, environmental influences, and methods of ELT in their native countries. A weak foundation is related to the status of English, the motivation of the students to learn English, and the insufficient interest demonstrated by teachers. Environmental factors that influence this phenomenon include the use of the native language, limited opportunities to practice English, and an isolated culture. In contrast, the English teaching approach included the medium of instruction, use of the first language in English classes, low proficiency of teachers in English, and a lack of writing practice in educational contexts.

3.2 Research Gap

The reviewed studies primarily concentrate on challenges in academic writing without specifically focusing on English major BA honors first-year undergraduate students. Understanding the distinct challenges faced by English major BA honors first-year undergraduate students during their initial academic year is crucial, as they may encounter challenges specific to their transition into higher education. There is also a lack of research with a clear focus on the variety of influential factors that are responsible for these problems in academic writing faced by English major BA honors first-year undergraduate students. Moreover, existing studies do not effectively focus on the influence of cultural differences on academic writing challenges among students. Cultural differences and EFL backgrounds can significantly impact writing styles, expectations, and struggles. The previous studies tend to focus on specific writing challenges, such as grammar or citation. However, there is a gap in research that takes a more holistic approach to assess overall writing proficiency and its development over the course of the first year. The reviewed studies do not clearly highlight the perceptions of teachers regarding the academic writing problems faced by students. Since teachers are directly involved in this process, their perspective matters significantly. Lastly, the majority of prior studies have focused on their own contexts. And as of now, there hasn't been any specific research on the problems in academic writing faced by English major BA honors first-year undergraduates in the context of Bangladesh.

4. Research Methodology

4.1 Setting and Subjects

The setting of the research is the department of English of two Bangladeshi universities namely, Jahangirnagar University, Savar, Dhaka which is public university and City University, Savar, Dhaka which is a private university. These two universities were chosen because the researcher was a student of the department

of English at Jahangirnagar University and currently he is a lecturer of English at City University. Therefore, he had required access to these departments.

The subjects of the research are the English major BA honors first year undergraduates at Jahangirnagar University and City University which have English as the primary medium of instruction in the classes. A total of 132 students from Jahangirnagar University (62) and City University (70) voluntarily responded to the survey questionnaire with an understanding of the implication of the research questionnaire. These learners have already finished their secondary and higher secondary level education where English was a compulsory subject. Written samples of total 88 students were taken and semi-structured interviews were taken as well from 30 teachers who are currently teaching at the department of English, Jahangirnagar University or City University.

4.2 Instrumentation and Data Collection

4.2.1 Method and Strategy

The researcher collected the data under the mixed method of data collection under the deductive research approach for this project.

4.2.2 Written Samples

The researcher used written sample as a research instrument to collect data from the writing of the participants. A total of 88 written samples were collected and error analysis was done. In the topic, students were asked to write a descriptive composition about “My Reading Table” within 200 words and a narrative paragraph on “A spring fest that you have enjoyed” within 120 words.

4.2.3 Questionnaire

The researcher has chosen to use an online questionnaire method in this study to collect data from the participants. The online questionnaire was sent to the English major BA honors first year undergraduates at via their emails and their Messenger inboxes, which they also circulated to their batch groups. All the questions were taken from previous literature reviews. The questionnaire was prepared with the help of Google Forms with various types of questions including 5-point Likert scale questions, 2-point Yes/No questions for the collection of quantitative data.

4.2.4 Interview

Thirty (30) teachers who have offered courses to first year undergraduate students at the department of English of Jahangirnagar University or City University were interviewed to find out their perceptions of the English major BA honors first year undergraduate students' writing problems and responsible factors. Each interview lasted about seven to eight minutes. These interviews were semi structured.

4.2.5 Reliability and Validity

Key (1997) described the validity of the research instrument as a test to determine whether the questionnaire measures what it is supposed to measure. Reliability is the accuracy and consistency of the measurement resulting from an assessment. Four methods can be used to assess the reliability of an instrument: and these are retest method, alternative form method, split-halves method and internal consistency method. The questions and statements used in the survey questionnaire and interview were collected and modified from the previous literature reviews and that is why reliability and validity of the research instrument is clearly maintained.

4.3 Data Analysis

Firstly, error analysis of 88 written samples of English major BA honors first year undergraduates was done. Bar charts are used to illustrate the results in percentage. Secondly, the information was gathered from 132 English major BA honors first year undergraduates at Jahangirnagar University and City University that were selected randomly. The frequency of their percentage is used to examine the data. Data is displayed using bar charts, tables and explanations. Google Spreadsheet is used to evaluate the data. The statistical tool that is used to analyze the data is comparison and contrast. A five-point Likert scale was used to assess the responses from the participants to state to what extent they agreed or disagreed with the given statement. A two-point Scale was also incorporated in the assessment of the data procedure, referring to 'Yes' or 'No'. Then, open-ended questions were analyzed using descriptive analysis in relation to the responses. Finally, analysis of the teachers' interviews was done using descriptive analysis in relation to their responses of the questions.

5. Findings and Discussions

5.1 Analysis of Written Samples

A total of 88 written samples of a composition on, “My Reading Table” and a narrative paragraph on “A spring fest that you have enjoyed” were collected and error analysis was done. Assessing these samples, it can be stated that, English major BA honors first year undergraduates also face genre specific problems, since some of the students did not follow the convention of writing an academic composition. The percentage of errors is shown in the bar chart below:

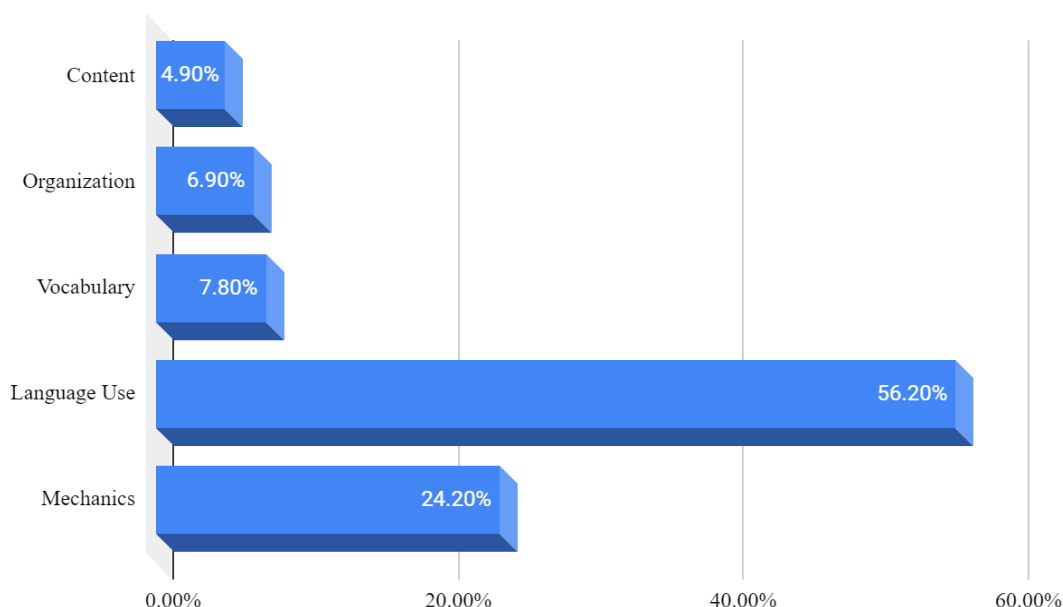


Figure 3: Error analysis of writing samples

A total of 694 errors were identified in the collected written samples. These errors are divided into five major categories and these are according to content, organization, vocabulary, language use and mechanics. These categories are made following the Jacob et al.'s (1981) scoring profile. Here, content indicates the accuracy of given information, organization indicates the accuracy of given idea and form, vocabulary indicates the accuracy of choice of diction, language use indicates the accuracy of grammar and construction and mechanics indicates the accuracy of spelling, punctuation and convention. There is maximum 56.2% of error in regard of language use in these written samples.

Again, the analysis of errors in syntactic morphological category was done according to the following subcategories (the examples are drawn from the participants' composition writing on "My Reading Table").

1. Errors in articles: I usually keep my important notes, geometry box, a alarm clock.
2. Errors in the use of number: I am a first year undergraduates.
3. Errors in parts of speech: My reading table in not very big and small.
4. Errors in tense: So, many of us have to shared one reading table.
5. Errors in sentence construction: In my reading table, it is my priority.
6. Errors in word choice: My reading table is very sample.
7. Errors in verbs: Besides, my reading table has an enough spaced drawer, where I stores.
8. Errors in the use of prepositions: I use it in the night when electricity is gone.
9. Errors in subject-verb agreement: A comfortable chair also have there.
10. Errors in spelling: My reading table stores all my necessary documents.
11. Errors in capitalization: I put on my Academic books on the first layer.
12. Errors in punctuation: My reading table is created of wood_and has three drawers.

The percentage of errors is shown in the bar chart below:

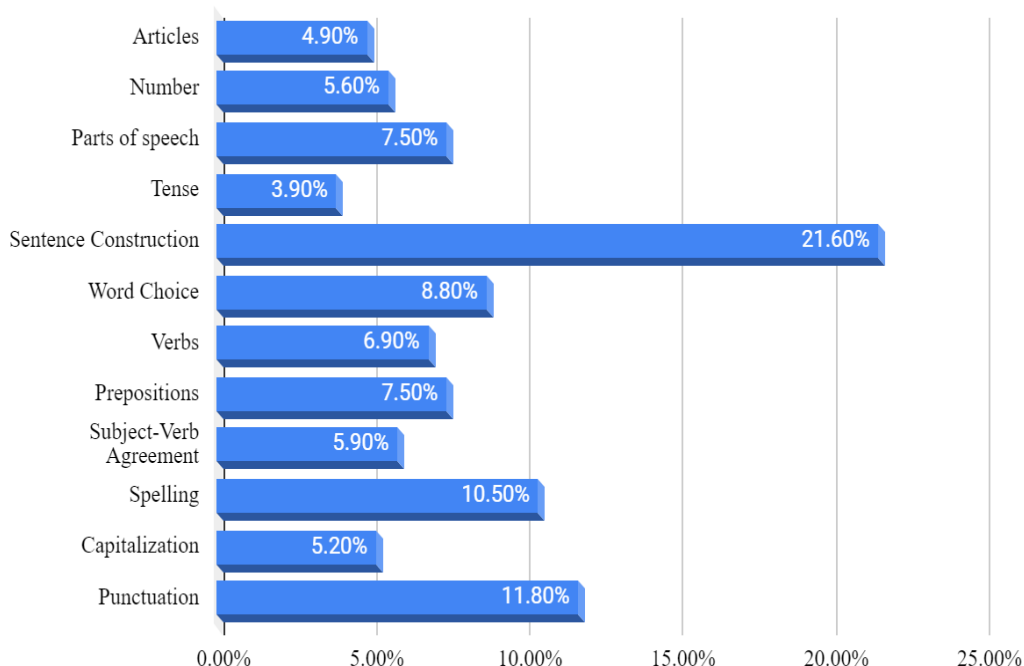


Figure 4: Errors in syntactic morphological category

In the collected written samples, a total of 612 errors were identified according to syntactic morphological category. And these errors are divided into different subcategories according to articles, number, parts of speech, tense, sentence construction, word choice, verbs, prepositions, subject-verb agreement, spelling, capitalization and punctuation. As the figure shows that, maximum 21.6% error was in the sentence construction.

5.2 Analysis of the Questionnaire

A total of 132 English major BA honors first-year undergraduate students responded about their problems in academic writing and the factors responsible for these problems through Google forms. Among these undergraduate students, 47.7% or 63 were male, and 52.3% or 69 were female.

The first section of the questionnaire was about some basic ‘Yes/No’ questions as shown in the following table:

Questions	Yes		No	
Are you confident to write on any relevant topic in English easily?	Count: 95	Percentage: 72%	Count: 37	Percentage: 28%
Do you have sufficient command over the necessary sentence structures for academic writing in English?	Count: 93	Percentage: 70.5%	Count: 39	Percentage: 29.5%
Are you more concerned about grammar than the organizational pattern of your English academic writing?	Count: 83	Percentage: 62.9%	Count: 49	Percentage: 37.1%
Do you practice at home for English academic writing?	Count: 63	Percentage: 47.7%	Count: 69	Percentage: 52.3%
Do you believe your English academic writing now is better than it was at the higher secondary (HSC) level?	Count: 116	Percentage: 87.9%	Count: 16	Percentage: 12.1%

Table 1: Responses of ‘Yes/No’ Questions

The next section is about the specific academic writing problems faced by English major BA honors first-year undergraduates. The statements with count and percentage are shown in the table:

Statement	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
I have faced some problems in English academic writing.	Count: 22 16.7%	Count: 91 68.9%	Count: 9 6.8%	Count: 10 7.6%	Count: 0 0%
When I write, I don't know how to express my own voice.	Count: 19 14.4%	Count: 62 47%	Count: 14 10.6%	Count: 32 24.2%	Count: 5 3.8%
Identifying the specific topic and generating ideas is a challenge for me.	Count: 19 14.4%	Count: 64 48.5%	Count: 14 10.6%	Count: 30 22.7%	Count: 5 3.8%
My problem in writing is bringing the ideas together in a coherent manner.	Count: 12 9.1%	Count: 77 58.3%	Count: 21 15.9%	Count: 19 14.4%	Count: 3 2.3%
Choosing the correct vocabulary, word form and sentence to express my ideas is challenging.	Count: 27 20.5%	Count: 72 54.5%	Count: 11 8.3%	Count: 16 12.1%	Count: 6 4.5%
Maintaining grammatical rules is a major problem for me.	Count: 15 11.4%	Count: 64 48.5%	Count: 15 11.4%	Count: 35 26.5%	Count: 3 2.3%
I make spelling mistakes in English academic writing.	Count: 17 12.9%	Count: 62 47%	Count: 11 8.3%	Count: 32 24.2%	Count: 10 7.6%
My problem in writing is not having enough knowledge about academic writing standards (rules, methods, style, and tone).	Count: 21 15.9%	Count: 63 47.7%	Count: 21 15.9%	Count: 25 18.9%	Count: 2 1.5%
Paraphrasing in writing is a struggle for me.	Count: 16 12.1%	Count: 68 51.5%	Count: 18 13.6%	Count: 24 18.2%	Count: 6 4.5%
Correct referencing and citation is a difficult task for me.	Count: 22 16.7%	Count: 67 50.8%	Count: 22 16.7%	Count: 18 13.6%	Count: 3 2.3%

Table 2: Problems in English academic writing

So, from the above discussions it can be said that, English major BA honors first year undergraduates face problems in regard of generating ideas, coherence, vocabulary, sentence construction, grammar, spelling, writing standards, paraphrasing and referencing in English academic writing.

The last section is about the factors which are responsible for the academic writing problems faced by English major BA honors first year undergraduates. The statements with count and percentage are shown in the table:

Statement	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Using L1 (Bangla language) in English classes is an influential factor in my academic writing problems.	Count: 27 20.5%	Count: 46 34.8%	Count: 32 24.2%	Count: 23 17.4%	Count: 4 3%
Weak foundation in English is responsible for my writing difficulties.	Count: 18 13.6%	Count: 69 52.3%	Count: 21 15.9%	Count: 20 15.2%	Count: 4 3%
Lack of motivation is a major factor for my academic writing challenges.	Count: 15 11.4%	Count: 60 45.5%	Count: 21 15.9%	Count: 28 21.2%	Count: 8 6.1%
Lack of clear guidance and instructions from teachers is responsible for my writing difficulties.	Count: 14 10.6%	Count: 58 43.9%	Count: 33 25%	Count: 20 15.2%	Count: 7 5.3%
Lack of academic writing practice is a major factor for me.	Count: 19 14.4%	Count: 82 62.1%	Count: 16 12.1%	Count: 12 9.1%	Count: 3 2.3%
Medium of instruction (MOI) at the higher secondary (HSC) level is a great concern in my case.	Count: 23 17.4%	Count: 60 45.5%	Count: 35 26.5%	Count: 12 9.1%	Count: 2 1.5%
Lack of academic writing courses in our educational institutions is an influential factor for me.	Count: 20 15.2%	Count: 66 50%	Count: 28 21.2%	Count: 18 13.6%	Count: 0 0%
Teachers' low proficiency in English is responsible for my academic writing challenges.	Count: 14 10.6%	Count: 46 34.8%	Count: 33 25%	Count: 28 21.2%	Count: 11 8.3%
Cultural differences play a significant role in my English academic writing problems.	Count: 12 9.1%	Count: 63 47.7%	Count: 28 21.2%	Count: 25 18.9%	Count: 4 3%
Tendency to memorize topics is causing my writing difficulties.	Count: 21 15.9%	Count: 66 50%	Count: 23 17.4%	Count: 16 12.1%	Count: 6 4.5%

Table 3: Factors responsible for problems in English academic writing

So, from the above discussions it can be said that, there are various factors which are responsible for the academic writing problems faced by English major BA honors first year undergraduates such as; using Bangla language in English classes, weak foundation in, lack of motivation, lack of clear guidance and instructions, lack of academic writing practice, medium of instruction at the higher secondary level, lack of academic writing courses, teachers' low proficiency, cultural differences and students' tendency to memorize.

Among all of these, the concern of mother tongue interference is a very important one which is indicated in terms of using Bangla language in English classrooms, medium of instruction in higher secondary level, cultural differences etc. Learners make direct translations from their first language. This is probably due to the tendency of thinking in the first language before writing. This is what Selinker (1972) refers to when talking about language transfer.

Examples:

- a) After that I want to open my business.
- b) I closed my cell phone.

Correct sentences:

- a) After that I want to start my business.
- b) I switched off my cell phone.

Lastly, from the open ended questions it is found that, the students often get enrolled in writing courses and try to practice at home to deal with these responsible factors to overcome their academic writing problems.

5.3 Analysis of the Interview

Semi structured interviews of 30 teachers were conducted. Analyzing the thoughts from conversation with the teachers, it can be said that, academic writing in English requires a particular level of proficiency that English major BA honors first year undergraduates find challenging in some cases. Our higher secondary level education does not prepare students well enough for the academic writing expectations at the undergraduate level and factors like mother tongue interference is so crucial in this context. They also believe that, a lack of employment of the method in teaching English academic writing, inadequate feedback and assessment and sometimes lack of teachers' interest are also influential factors.

Teachers try their best to solve the academic writing problems of the English major BA honors first year undergraduates. They suggest that, the possible support for improving English academic writing can be providing proper feedback to the students and practicing more and more.

6. Conclusion and Recommendations

6.1 Conclusion

To sum up, there are various factors which are responsible for the problems in academic writing faced by English major BA honors first year undergraduates such as; using Bangla language in English classes, weak foundation in, lack of

motivation, lack of clear guidance and instructions, lack of academic writing practice, medium of instruction at the higher secondary level, lack of academic writing courses, teachers' low proficiency, cultural differences and students' tendency to memorize. A lack of employment of the method in teaching English academic writing, inadequate feedback and assessment and sometimes lack of teachers' interest are also influential factors. Students often get enrolled in writing courses and try to practice at home to deal with these responsible factors to overcome their academic writing problems.

6.2 Recommendations

Some recommendations are given for developing the proficiency of language learners in written English on the basis of the present study:

- Writing skills need to be practiced in the classrooms regularly and teachers should provide clear and constructive feedback to the students. This feedback loop is significant for students to understand and address their specific writing problems.
- There should be less interference of mother tongue (L1) in English classes. And emphasis can be given on enriching English vocabulary.
- Students need to practice creative and free-writing at home without the help of any guidebook. They should follow the instructions from the teachers and the textbooks.
- Writing workshops should be organized that specifically target content, organization, vocabulary, language use and mechanics can be instrumental.
- Technology is so crucial in the modern academia. So, the integration of various writing tools and software will be beneficial.

6.3 Suggestions for further study

There are several limitations of this research that the researcher could not overcome due to limited resources and time. To improve the findings further in a future research project, the research can be done in a much broader scope with the inclusion of several other universities from different geographic locations around Bangladesh and beyond. It is also recommended that research on the examination and evaluation of teaching strategies should be conducted in order to identify possible effective solutions that can be applied in the classroom by the teachers to avoid problems in English academic writing.

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The Blue Economy of Bangladesh: A Strategic Narrative on Challenges and Opportunities

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Abstract: *This paper examines the strategic role of Bangladesh's blue economy in promoting economic diversification, climate resilience, and sustainable development. Drawing on both primary and secondary data, the study evaluates the current state, challenges, and opportunities of marine resource utilization in the Bay of Bengal. The discussion is supported by robust empirical data, offering a well-rounded perspective on the status of the key marine sectors and the challenges to their future potential. As Bangladesh navigates the challenges of climate change and resource management, this study presents a timely and actionable framework for harnessing the full potential of its marine economy. Moreover, the study provides a critical analysis of existing gaps in infrastructure, policy, and capacity, while proposing strategic framework for sustainable marine resource utilization.*

Key Words: Blue Economy (BE), Economic diversification, Climate resilience, Bay of Bengal (BoB), Sustainable development, Strategic framework, Human capital

Introduction

The densely populated country of Bangladesh is encircled by huge marine boundary that is 1.5 times larger than its land area. A recent international resolution on the maritime areas with its neighboring nations, India and Myanmar, Bangladesh's marine sphere is projected to cover 118,813 sq. km, with an expanded continental shelf covering about 37,000 sq. km and having a maximum depth of 2,200 meters (PCA, Verdict on July 7, 2014). Millions of people rely on the ecosystem services from the coastal and marine ecosystem for their livelihoods (Islam et al., 2018). Due to the blue economy, Bangladesh currently has excellent opportunities to work in complex, varied, and dynamic situations. Currently, Bangladesh's blue economy brings forth a wide range of ramifications, demonstrating major effects on the individual,

organizational, and societal levels that need in-depth research (Gibson, L. M., 2023). In the realities of Bangladesh's economic capacity, the country's rapid population growth is likely to pose a formidable threat to its current economy. It is, thus, inevitable to harness its greatest alternative resources such as marine-based economies, that can create more employment opportunities and contribute to GDP growth in Bangladesh. Additionally, there is an urgent need for greater understanding and a model of instructions among stakeholders, such as policymakers, business, and coastal communities regarding the significance of the blue economy for the sustainable development of Bangladesh (Alam, A. M. K., 2018).

Objective of the Study

The specific objectives of this study are as follows:

1. To explain the current state of the blue economy in Bangladesh
2. To describe the potentials and advantages of blue economy in Bangladesh
3. To identify the obstacles that Bangladesh must overcome to implement the blue economy successfully, and to make some policy recommendations to address those obstacles.

Methodology

This research is focused on using a participatory institutional approach to adopt a holistic and integrated methodology that seeks strategic narration. An extensive literature review on coastal and marine resources, as well as their management problems and constraints, has been carried out from both offline and online resources to gather secondary data in the context of Bangladesh. For the study, primary and secondary sources of qualitative and quantitative data have been gathered and analyzed properly. Primary data is gathered through interviews with relevant questionnaires in the selected relevant research areas. Furthermore, from international databases, peer-reviewed journals, relevant books, and online publications, secondary data is gathered and comprehensively analyzed to arrive at valid policy recommendations at the conclusion of the research.

Structure of the Paper

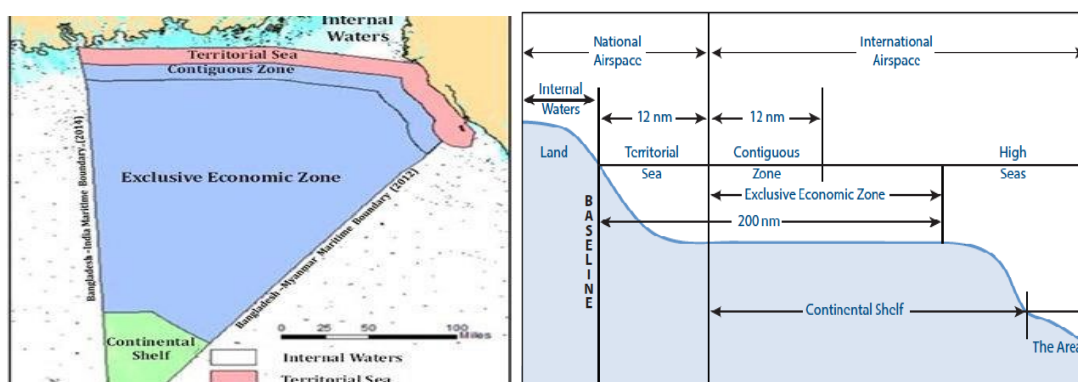
The corpus of the study is divided into five sections furnished in an organized and sequential manner. Section 1 of the paper introduces statements of the problem, objectives of the research, research methodology, literature review. Section 2 explains the applicability of blue economy and potential sectors of the blue economy in Bangladesh. Section 3, as per the relevant of the study, brings forth major challenges

of blue economy in Bangladesh. Section 4 elucidates the various spectrum of the benefits of blue economy of Bangladesh. Lastly, section 5 expounds concluding remark of the research, proposing evaluated policy recommendations.

Scope of the Study

Bangladesh also has a coastline (711 km long) along the Bay of Bengal to the south, which extends for approximately 580 kilometers (Banglapedia, 2021). The maritime area of Bangladesh includes the waters within its territorial sea, which extends up to 12 nautical miles (22.2 kilometers) from its coastline (UNCLOS Chapter 3). This includes the waters around the offshore islands of Bangladesh, such as the Saint Martin's Island and the Chittagong Hill Tracts. Bangladesh also has an exclusive economic zone (EEZ) that extends up to 200 nautical miles (370.4 kilometers) from its coastline. Apart from that, Bangladesh heralds the 154 nautical miles, extending 200 nautical miles due to its shallow water in the Bay of Bengal at continental shelf (ISA-1994, Jamaica). The country's maritime area is governed by its national laws and international law, including the United Nations Convention on the Law of the Sea (UNCLOS). The following map 1 depicts spatial zones that simply define several sea zones, boundaries and shelves:

Map 1: Maritime Zones based on Law of the Sea



Source: International Institute for Law of the Sea Studies

Geographically, the Ganges, Brahmaputra, and Meghna, three significant rivers that meet in the country, accumulating huge sand beds in the Bay of Bengal and creating enormous Bengal fans. Besides, Bangladesh has several geographic advantages that contribute to the development of its blue economy as follows:

- **Coastal location:** Bangladesh has a long coastline of 711 km along the Bay of Bengal. This makes it an ideal location for fisheries and aquaculture, which are essential

components of the blue economy. The coastal location also offers opportunities for port development and maritime transport as well as several precious minerals, petroleum and gas explorations.

- **River systems:** Bangladesh has an extensive network of rivers, including the Ganges, Brahmaputra, and Meghna and their tributaries holding approximately 79 % of the country (Banglapedia, 2021). These rivers provide opportunities for inland water transport and are also a source of freshwater for irrigation and aquaculture.
- **Mangrove forests:** The Sundarbans, a UNESCO World Heritage Site, is the largest contiguous mangrove forest in the world and is in Bangladesh. These mangrove forests provide a habitat for a diverse range of species, including several commercially important fish species.

I. Potential Sectors of the Blue Economy in Bangladesh

Several industries, around 26 identified sectors including fisheries and aquaculture, shipping, shipbuilding and repair, renewable energy, sustainable tourism and other sectors, have substantial potential in Bangladesh's blue economy (MoFA, 2017). To understand the potential sectors of the blue economy of Bangladesh, at first ocean based and ocean related resources have been sorted in table 1 and then the specified potential sectors of blue economy of Bangladesh explained:

Table 1: An overview of Ocean based and Ocean related economy

Ocean Based Resources	Ocean Related Resource
<i>Fisheries and aquaculture; beach sands, heavy minerals e.g. Zircon, Ilmenite on the beach (from Patenga to Teknaf), offshore oil and gas extraction; mining; ocean energy; shipping/marine transportation; maritime tourism; and marine construction etc.</i>	<i>Seafood processing, marine biotechnology, chemicals and salt production, and so on. It also includes shipbuilding and recycling, ports, tourist resorts, communication, maritime insurance and law, maritime technical services etc.</i>

Source: Author's Creation, Sample Survey 2023

Marine Aquaculture Industry and Fishing

Bangladesh's fisheries resources ranked third globally in FY 2020-21, with a harvest of around 20 million tons of fish, contributing 3.57% to the country's GDP. Here are some rational data collected from different sources:

Table 2: Current Status of Marine Aquaculture Industry and Fishing

Sectors	Data and Information
1. Marine Aquaculture Production:	<ul style="list-style-type: none"> • Profile: About 711 km long coastline with 166,000 km² EEZ with 1093 aquatic marine organisms including finfish, shellfish, shrimps, seaweed, etc. • Total marine aquaculture production in Bangladesh: Approximately 670,000 metric tons in 2022. • Leading marine aquaculture species: Shrimp (black tiger shrimp, giant freshwater prawn), tilapia, pangasius (catfish), and various types of marine finfish. • Shrimp production: Bangladesh is one of the top global producers of shrimp, with around 350,000 metric tons produced in 2020.
3. Export and Revenue:	<ul style="list-style-type: none"> • Export value of seafood products: Bangladesh exported seafood worth approximately \$600 million in 2021. • Major seafood export items: Shrimp, frozen fish, fish products, and value-added seafood items.
4. Fishing Industry:	<ul style="list-style-type: none"> • Major fishing regions: The Bay of Bengal and inland waters, including rivers, canals, and ponds. • Commonly caught fish species: Hilsa, pomfret, ribbonfish, mackerel, tuna, and various other demersal and pelagic fish species.
5. Sustainability and Conservation Efforts:	<ul style="list-style-type: none"> • Aquaculture certification: Several aquaculture farms in Bangladesh are certified by global standards such as Aquaculture Stewardship Council (ASC) and Best Aquaculture Practices (BAP). • Marine conservation areas: Bangladesh has established 37 Marine Protected Areas (MPAs) and 12 Ecologically Critical Areas (ECAs) to protect marine ecosystems and biodiversity.

Source: Author's Creation 2023 (data collected from the Yearbook of Fisheries Statistics of Bangladesh 2021-22, 2019-20)

Sustainable Marine Tourism

The nation has a lot of potential for marine tourism zones, which could boost the economy while also promoting environmental preservation and protection in those areas. Here are some potential coastal and marine tourism zones in the following box 2:

Box 2: Potential Sustainable Marine Tourism Zones

1. Cox's Bazar:

- Length of the world's longest natural sandy beach: Approximately 120 kilometers.
- Annual number of tourists: Over 2 million visitors.
- Contribution to the local economy: Cox's Bazar generates significant revenue from tourism, with estimates suggesting around \$1 billion annually.

2. Saint Martin's Island:

- Area of the island: 8 square kilometers.
- Number of coral species: More than 250 species.
- Estimated number of tourists per year: Around 100,000 visitors.

3. Sundarbans National Park:

- Size of the Sundarbans mangrove forest: Approximately 10,000 square kilometers (60% in Bangladesh).
- Number of Bengal tigers: The Sundarbans is home to the largest population of Bengal tigers in the world.
- Contribution to the blue economy: Sundarbans plays a vital role in supporting eco-tourism, fishing, and other related activities.

4. Kuakata:

- Length of the beach: 18 kilometers.
- Number of coconut trees along the beach: More than 3,500.
- Annual number of visitors: Approximately 200,000 tourists.

5. Bakkhali:

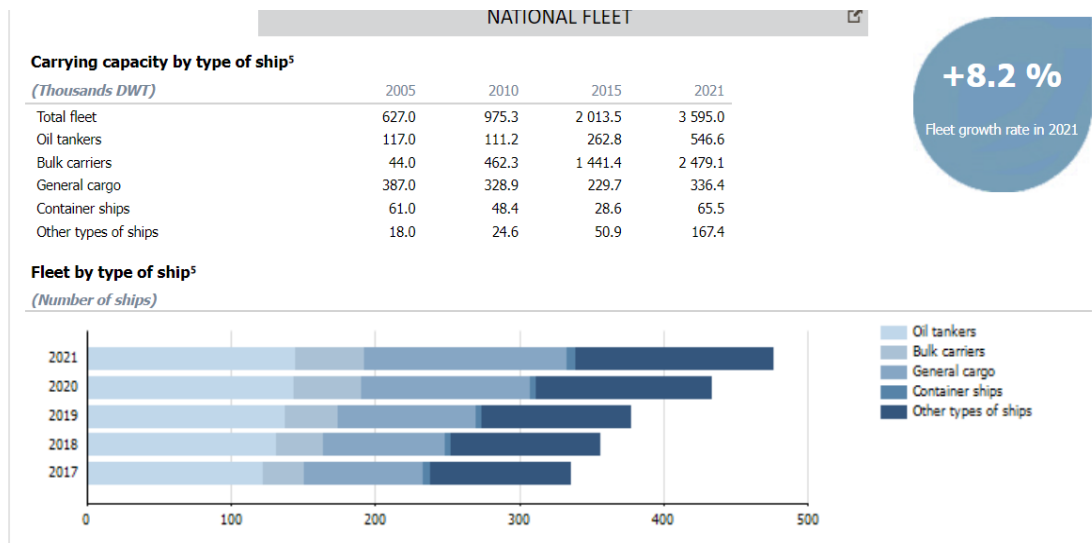
- Length of the beach: 8 kilometers.
- Number of fishing boats: Over 2,000 traditional fishing boats operate in the area.
- Contribution to the local economy: Fishing and tourism activities contribute significantly to the livelihoods of the local communities.

Maritime Shipping and Trade

i. Shipping

The shipping sector is an important contributor to Bangladesh's economy, accounting for around 6% of the country's GDP and providing direct and indirect employment to a significant number of people (UNCTAD, 2021). Here, up to from 2017 to 2021, the prospect of shipping in Bangladesh is figured out defining different types of fleets:

Bar diagram 1: Different types of national fleets with capacity

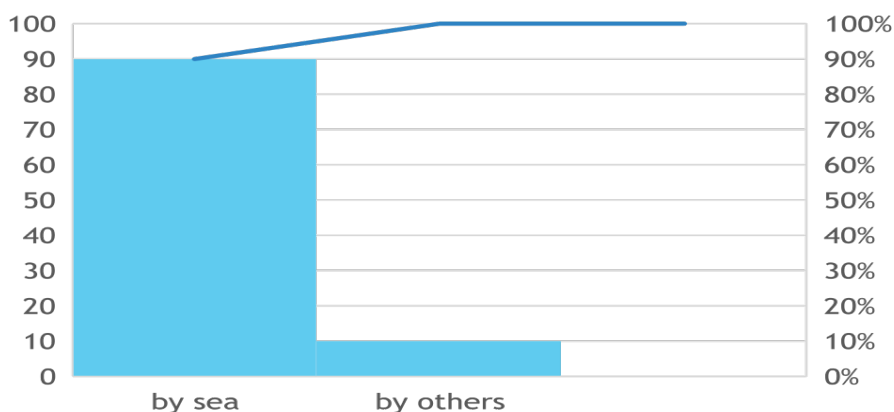


Source: UNCTAD Data Hub 2021

ii. Maritime Trade

The country is strategically located between the Indian Ocean and the Bay of Bengal, which makes it a vital gateway for sea trade between Asia and Europe. The Port of Chittagong, one of the seaports of Bangladesh, located in the southeastern part of the country, is the principal seaport of Bangladesh and handles most of the country's international trade. The prospect of international trade by sea can be observed with the following bar diagram 2:

Bar diagram 2: Total International Trade by Sea and by others



Source: UNCTAD Data Hub 2021

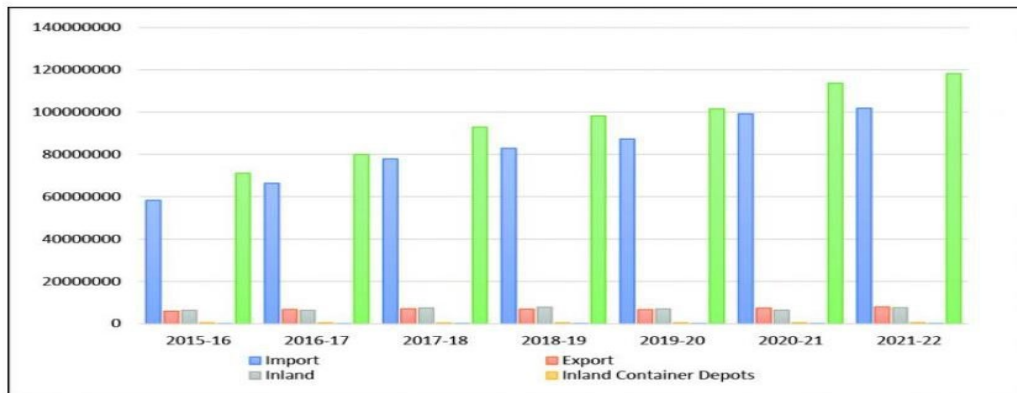
Moreover, it serves as a major hub for the transshipment of products to nearby nations like India, Nepal and Bhutan.

iii. Sea Port Facilities

Bangladesh currently has three operational ports with advanced technical support that ensure the principles of the blue economy. These ports act as points of entry for the import and export of goods, connecting the nation to other regions of the globe and generating an economy in GDP. The largest one, Chattogram, and second largest Mongla are in full operation. The third in size and capacity, Payra Port is partially in use. A fourth one named Matarbari seaport is on its way to be opened and become fully functional very soon. According to expert respondents, here are some recent data on seaport facilities in Bangladesh:

1. Chittagong Port: The largest and busiest port in Bangladesh, located in the southeastern part of the country. It handles around 90% of the country's total seaborne trade. The following bar diagram 3 depicts the potential of the port:

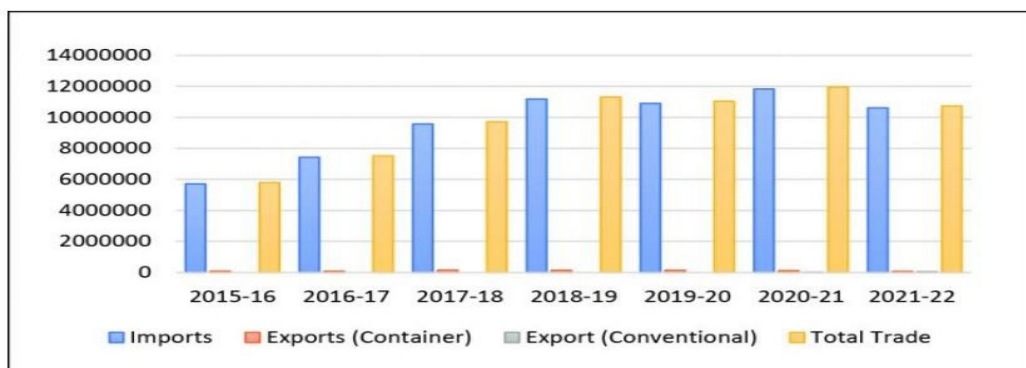
Bar diagram 3: Chittagong Port Authority Annual Cargo Handling (in metric tons)



Source: Author's own using data from the Chittagong Port Authority.^[19]

2. Mongla Port: Located in the southwestern part of Bangladesh, this port serves as a gateway to the Sundarbans, the world's largest mangrove forest. The following bar diagram 4 depicts the potential of the port:

Bar diagram 4: Mongla Port Authority Annual Cargo Handling (in metric tons)



Source: Compiled from Mongla Port Authority

Ship Breaking and Recycling Industry

From its inception in the 1960s, Bangladesh's ship recycling sector concentrated in Sitakunda (Bhatiary to Kumira), just north of Chittagong city on the Bay of Bengal, has experienced rapid expansion. Almost 25000-40000 people directly or indirectly are employed in the sector, and it is thought that the nation demolishes more than 500-700 ships annually (Ahammad & Sujauddin, 2017). In Bangladesh recycling ships entails disassembling them into their component parts, which may include steel, iron, and other resources. Workers disassemble the ships with manual equipment in a labor-intensive procedure. The salvaged ship materials are sold to a variety of companies for further processing and repurposing

Shipbuilding Industry

The shipbuilding sector in Bangladesh is closely linked to the country's blue economy, as it involves the construction of various types of vessels, including fishing boats, cargo ships, oil tankers, passenger ferries, and naval vessels. Although Bangladesh's shipbuilding sector began in the 1950s, growth has only lately been seen. Presently, Bangladesh is home to more than 150 shipbuilding businesses. These businesses, which primarily focus on building small to medium-sized ships, are classified as small and medium-sized enterprises (SMEs).

Marine and Coastal Energy

i. Huge reserve of petroleum (Oil, Gas)

In Asia, Bangladesh is regarded as the 19th largest producer of natural gas (Alam et al. 2019). A total of 20 wells were dug in the Bay of Bengal's offshore locations until 2014. Only two gas reserves were discovered from the exploration. Today,

Bangladesh discovered 26 blocks in the Bay of Bengal. Among 26 blocks, 15 are deep-sea blocks and 11 are in shallow water blocks (Bari, 2017). Also, The Cox's Bazar Submarine Canyon, located off the coast of Cox's Bazar in Bangladesh, has shown potential for hydrocarbon resources (oil and gas reserves). Studies and seismic surveys have indicated the presence of hydrocarbons in the area, suggesting the possibility of significant reserves.

ii. Mining Minerals

Bangladesh has identified areas with potential for offshore exploration of minerals such as heavy minerals, placer minerals, and rare earth elements. The potential for offshore mining is also supported by the fact that Bangladesh is located at the convergence of several tectonic plates, which increases the likelihood of finding mineral deposits. Sands containing valuable heavy minerals are found intermittently over the length of a 250 km coastal belt from Patenga to Teknaf. The entire coastal belt has been explored with the discovery of 17 deposits of potentially valuable minerals (Alam, 2004). Additionally, Bangladesh has been granted a contract to explore poly metallic nodules in an area of about 133,000 square kilometers in the Central Indian Ocean Basin, according to a report by the International Seabed Authority (ISA) in 2018. The nodules contain minerals such as copper, nickel, cobalt, and manganese, which are essential for the manufacturing of high-tech electronics, batteries, and other industrial products.

iii. Marine Biotechnology and Bioengineering

The ocean is home to a vast array of biological resources, from microorganisms to macro fauna, which can be harnessed for a range of applications, including food production, pharmaceuticals, and bioplastics. According to a report published by the Bangladesh Investment Development Authority (BIDA) in 2020, the biotechnology and bioengineering sectors have been growing steadily in recent years, with a 15% annual growth rate, including the establishment of a Biotechnology Park in Gazipur, Dhaka, and the Biotech Innovation and Incubation Centre at the Bangladesh Council of Scientific and Industrial Research (BCSIR)

iv. Marine Renewable Energy

According to the International Renewable Energy Agency (IRENA), Bangladesh has the potential to generate 30,000 MW of electricity from renewable sources, including wind, solar, and hydro. According to a study by the Asian Development Bank (ADB)-2023, the country has the potential to generate up to 2,700 MW of electricity from tidal power. According to the respondents, here are some of the coastal renewable energy sources of Bangladesh:

Table 3: Coastal Renewable Energy

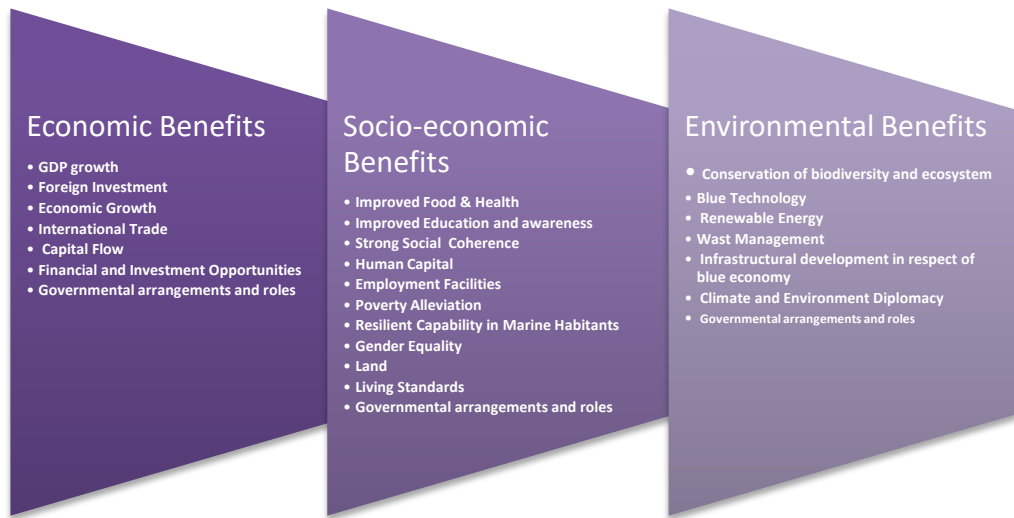
Wind energy: The coastal region of Bangladesh experiences strong and consistent winds, making it an excellent location for developing wind farms. Wind turbines can be installed offshore or onshore to generate electricity. For example, Khurushkul Wind energy plant produces 60-megawatt electricity.
Solar energy: The coastal region of Bangladesh receives ample sunlight throughout the year, making it an ideal location for installing solar panels to generate electricity. Solar farms can be installed on open land, rooftops, or offshore platforms.
Hydro energy: The tidal and wave energy of the Bay of Bengal can be harnessed to generate electricity. Tidal power plants can be installed on the coastline, while wave energy converters can be installed offshore.
Biomass energy: The coastal region of Bangladesh has abundant biomass resources, such as agricultural residues, animal waste, and aquatic plants. These can be used to generate bioenergy, such as biogas, biodiesel, and bioethanol.
Geothermal energy: Bangladesh has significant geothermal potential, especially in the coastal regions where hot springs and geysers are abundant. This energy can be harnessed to generate electricity or for heating purposes.

Source: Author's Creation, Sample Survey 2023

II. Benefits from Blue Economy of Bangladesh: How does Blue Economy contribute to GDP?

With a strategic focus on harnessing its marine resources, Bangladesh can leverage the Blue Economy to foster sustainable growth, alleviate poverty, and build a resilient future for its people and the environment. With the help of figure 1, this chapter heralds the several benefits found from collecting primary and secondary data through sample surveys:

Figure 1: Benefits from Blue Economy of Bangladesh

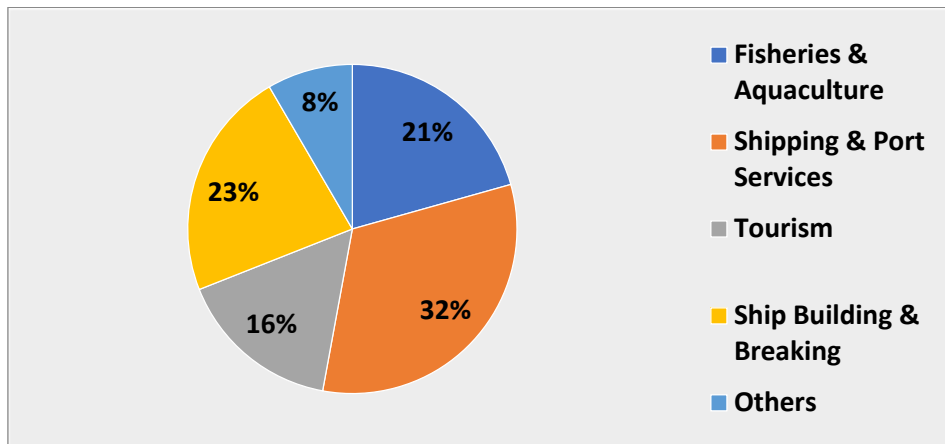


Source: Author's Creation, Sample Survey 2023

Contribution to GDP growth

According to the World Bank's "Blue Economy Assessment Report" released in 2021, the blue economy of Bangladesh is estimated to contribute around 4 percent of the country's GDP. The contribution of different sectors of Blue Economy to GDP of Bangladesh is illustrated in the pie chart 1:

Pie Chart 1: Sector wise contribution of the blue economy to GDP

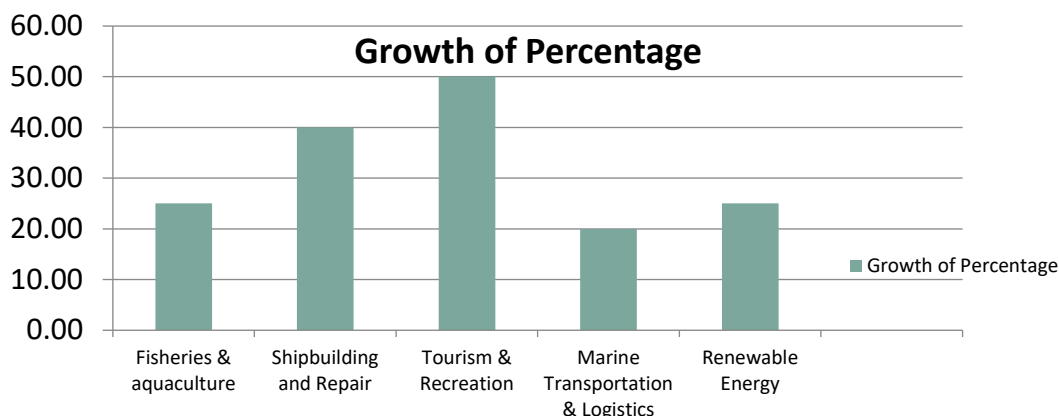


Sources: Author's Creation 2023, data collected from World Bank Report-2021

Employment Growth

According to a report by the World Bank (2022), the blue economy in Bangladesh contributed about USD 4.6 billion to the country's GDP in 2019 and employed more than 14 million people. According to the government's "Blue Economy Cell," this sector could create up to 5 million jobs by 2025, representing a 25% increase from the current number of jobs in the following sectors of blue economy in Bangladesh (Bar diagram 5):

Bar Diagram 5: Employment growth of percent



Source: Author's Creation 2023, data collected from the Blue Economy Cell

III. Challenges Barring the Development of the Blue Economy in Bangladesh

Climate Change and Sea level Rise

Bangladesh is a low-lying, deltaic country that is highly vulnerable to the impacts of climate change. The country is already experiencing the effects of climate change in the form of increased frequency and intensity of natural disasters such as floods, cyclones, and storm surges. It has a significant impact on Bangladesh's coastal areas, leading to sea level rise, ocean acidification, and extreme weather events such as cyclones and storms. These can result in loss of lives, properties, and livelihoods. Here are the challenges to climate change, according to respondents:

Table 4: Challenges to Climate Change

Serial no.	Type of Challenges	Quantity of Losses
1.	Sea Level Rise	<ul style="list-style-type: none"> Bangladesh is one of the most vulnerable countries to sea level rise due to its low-lying coastal geography. The rate of sea level rise in Bangladesh is estimated to be about 5 millimeters per year, which is higher than the global average. By 2050, it is projected that sea levels in the Bay of Bengal could rise by around 30 centimeters, and by 2100, the rise could be as high as 1 meter (IPCC-2024)
2.	Impact on Coastal Areas	<ul style="list-style-type: none"> Approximately 32 million people in coastal areas of Bangladesh are at risk of displacement due to sea level rise and climate change (UNFCCC Report, 2012). The erosion of coastal land due to rising sea levels has already led to the loss of about 1,000 square kilometers of land over the past several decades.
3.	Fisheries and Aquaculture	Studies suggest that by 2050, climate change could reduce the productivity of major fish species in the Bay of Bengal by 10-15%.
4.	Agriculture and Livelihoods	It is estimated that by 2050, about 25% of the country's rice-growing land could become unsuitable for cultivation due to salinity intrusion.
5.	Mangrove Forests and Biodiversity	Studies indicate that a 45-centimeter rise in sea levels could lead to the loss of 15-20% of the Sundarbans' mangrove forests and thousands of species in the maritime areas.
6.	Temperature	Standard temperature for marine ecology must remain between 22-28 Celsius.
7.	Climate Refugees	Over 7.1 million Bangladeshis were displaced by climate change in 2022, a number that could reach 13.3 million by 2050 (WHO, 2023).

Source: Sample Survey, 2023

Lack of Infrastructure and Technology

The productivity and competitiveness of the fishing, shipping, ship breaking and coastal tourism business may be constrained by the absence of contemporary infrastructure and technology (Samad, G., & Abbasi, J., 2022). Bangladesh's blue economy faces significant challenges due to a lack of technology and infrastructure, according to the various selected respondents:

Table 5: Challenges to Lack of Infrastructure and Technology

Serial no.	Type of Challenges	Quantity of Losses
1.	Limited Port Capacity:	<ul style="list-style-type: none"> • Number of active seaports: 3 (Chittagong, Mongla, and Payra) • Chittagong Port's handling capacity: around 3 million twenty-foot equivalent units (TEUs) per year. • Mongla Port's handling capacity: around 1.3 million tonnes of cargo per year. • Payra Port's handling capacity: around 0.15 million TEUs per year.
2.	Insufficient Dredging:	<ul style="list-style-type: none"> • Average annual sedimentation rate in the Bay of Bengal: 600 million tonnes. • Average annual dredging capacity of Bangladesh Inland Water Transport Authority: 1.7 million cubic meters.
3.	Inadequate Shipbuilding and Repair Facilities:	<ul style="list-style-type: none"> • Number of shipbuilding yards in Bangladesh: Over 150 wherein only one green ship breaking yard. • Shipbuilding capacity of Bangladesh: Over 1 million deadweight tonnes (DWT) per year but yet only could not get recognized by Hong Kong International Convention.
4.	Limited Cold Storage Facilities:	<ul style="list-style-type: none"> • Number of cold storage facilities in Bangladesh: Approximately 10,000 • Cold storage capacity: Around 4 million metric tons
5.	Low Internet Penetration:	<ul style="list-style-type: none"> • Internet penetration rate in Bangladesh: 38.9% (as of January 2023)

		<ul style="list-style-type: none"> Number of active internet subscribers: Over 110 million (as of July 2021)
6.	Limited Research and Development (R&D) Investments:	GDP: 0.34% (2019)
7.	Insufficient Maritime Surveillance and Security:	<ul style="list-style-type: none"> Coastline to be monitored: Approximately 718 km Number of naval patrol vessels: Around 37 (including 3 offshore patrol vessels) Number of radar stations along the coast: 5, 10 weather balloons, and 3 rawinsonde stations.
8.	Incapable Fishing Appliance (Boat, Trawler, Ship):	<ul style="list-style-type: none"> Unsophisticated fishing ships limit to catch fish only within 32% of the total area of EEZ 267 industrial boats with a maximum netting range of five kilometers Only 17 oceanic vessels for catching tuna and pelagic fishes beyond 200-meter deep in the BoB There is no data on fishing capacity or risk assessment areas in the deep sea, and that is why fishing vessels do not cross the government predefined 1,7000 sq.km area or 130 meters in depth

Source: Sample Survey, 2023

Moreover, the lack of proper sustainable transportation and communication infrastructure is one of the major problems in harnessing the leverage of the blue economy in Bangladesh.

Inadequate Maritime Trading Infrastructure

Establishing and maintaining maritime commerce facilities in the nation is difficult due to a lack of infrastructure, regulatory roadblocks, and insufficient investment. Here are some factors that halt the progress of the blue economy of Bangladesh, according to the respondents:

Table 6: Inadequate Maritime Trading Infrastructure

Serial no.	Type of Challenges	Quantity of Losses
1.	Port Congestion	In 2020, Chittagong Port faced an average turnaround time of around 5.4 days for container vessels, leading to delays and increased costs for businesses.
2.	Inefficient Customs Clearance:	It takes an average of 168 hours for import customs clearance in Bangladesh, which is higher than the global average of 90.8 hours.
3.	Insufficient Port Capacity:	Chittagong Port, the country's largest seaport, had a handling capacity of around 3 million TEUs (twenty-foot equivalent units) in 2020. However, the port faced a demand for nearly 3.5 million TEUs, indicating an infrastructure deficit.
4.	Inadequate Navigational Aids	As of 2021, Bangladesh had 105 operational lighthouses and 156 buoys. However, the extensive coastline of the country necessitates further investment in navigational aids to improve safety and navigation.
5.	Inadequate Port Technology:	The port of Chittagong had only one fully automated container terminal, which represents a small fraction of the overall capacity

Source: Sample Survey, 2023

Furthermore, many ports are unable to handle larger ships or greater quantities of cargo due to a lack of skilled people and sophisticated cargo handling equipment. This has an impact on the nation's capacity to utilize its advantageous geographic position to develop into a regional commerce center.

Inadequate Financing and Investment

According to the respondents, there are several reasons why financing and investment in the blue economy in Bangladesh remain inadequate. First, there is a lack of awareness and understanding of the potential benefits of the blue economy among

investors and financial institutions. As a result, they are often hesitant to provide funding for projects in this sector. Second, there is a shortage of skilled manpower and technical expertise in the blue economy, which makes it difficult for potential investors to evaluate the viability of projects and assess the associated risks. Third, the regulatory framework for the blue economy in Bangladesh is still in its early stages of development, which can create uncertainty and hinder investment.

IV. Recommendations

By utilizing a comprehensive recommendation model to create strategies for the sustainable use of marine resources, stakeholders can work together to encourage the responsible management of these vital ecosystems. Policy recommendations are included here:

- **Strengthen Ocean Governance and Institutional Framework:** To effectively manage the Blue Economy, the Bangladeshi government must improve coastal administration. This includes making certain that there are regulations and policies in place that are clear and that are effectively enforced. To achieve sustainable development, the governance and policy frameworks for Bangladesh's blue economy must be enhanced and concerted among several befitting ministries.
- **Comprehensive Blue Economy Strategy:** To harness the potentials of the blue economy, Bangladesh must develop a comprehensive blue economy strategy that outlines long-term vision for sustainable growth.
- **More Government Support:** It is possible if the blue economy sector is given budgetary priority by the Bangladeshi government. To make sure that the sector receives appropriate support, it will be necessary for government organizations and policymakers to work together in a coordinated manner.
- **Investment:** Bangladesh must create a thorough policy framework for the Blue Economy to solve low investment issues. A consultative approach involving all interested parties, including representatives from the public and business sectors, civil society, and academia, should be used to design the framework.
- **Providing Effective Financing Mechanisms:** To attract funds from both public and private sources, the government can create effective financing strategies including public-private partnerships. To create and implement efficient finance structures, this will require concerted effort from all parties.

- **Strengthen Maritime Infrastructure and Connectivity:** To facilitate growth in maritime trade and tourism, Bangladesh should invest in the development of maritime infrastructure and improve connectivity. This includes expanding and upgrading port facilities, enhancing navigational channels, and promoting efficient logistics and transportation systems.
- **Improve the Use of Renewable Energy Sources:** Bangladesh has a lot of potential for wind, solar and tidal electricity. To lessen reliance on fossil fuels and encourage sustainable growth, the government should give priority to the development of renewable energy sources using coastal and marine zones.
- **Encourage Research and Development:** For the blue economy to reach its full potential, it is important to continue investing in research and development in fields like aquaculture, maritime technology, and renewable energy. Government organizations, academic institutions, and business players should work together more frequently and invest in research and development.
- **Integrated Coastal Zone Management (ICZM)** that prioritizes conservation and sustainable use of coastal resources is crucial for the growth of Bangladesh's Blue Economy. To prevent economic development from harming marine and coastal ecosystems, this strategy should be incorporated among various sectors and stakeholders.
- **Diversification of Blue Economy Activities:** Bangladesh must expand its Blue Economy initiatives beyond established industries like aquaculture and fisheries. The growth of new industries including marine biotechnology, marine tourism, and renewable energy is possible.
- **Promote Structural Strategy:** It is vitally important to support a structural strategy for Bangladesh to fully implement the Blue Economy idea for climate change resistance.
- **Environment and Biodiversity Protection:** A strong commitment to environmental protection is necessary for Bangladesh's Blue Economy to thrive sustainably. The government must create robust laws and rules to make sure that the Blue Economy's operations are environmentally friendly and sustainable, promoting the practices of Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) in establishing any infrastructure in the coastal zone of Bangladesh (Hossain, D., 2023). Both marine spatial planning (MSP) and marine protected areas (MPAs) will help zone specific areas for the protection of different species.

- **Disaster Management:** Bangladesh is prone to natural disasters such as cyclones and floods, which can have a significant impact on the blue economy. A recommendation model should focus on building resilient infrastructure (adaptation and mitigation plans) and promoting disaster preparedness and response.
- **Address Marine Pollution:** Marine pollution is a major issue in Bangladesh and endangers both the viability of the blue economy and the health of the oceans. The government should take action to combat marine pollution, including upholding current legislation, enhancing garbage disposal, and raising public awareness of the problem.
- **Address Climate Change:** Climate change poses significant challenges to the sustainability of the blue economy. Bangladesh should prioritize climate change adaptation and mitigation measures, such as developing coastal protection mechanisms, promoting resilient infrastructure, and implementing sustainable coastal zone management plans.
- **Foster International and Regional Collaboration:** Research organizations, academic institutions, and businesses from foreign countries should collaborate to share information, expertise, and technology linked to the development of the blue economy.
- **Enhance Human Capital Development:** Investing in human capital is essential for the sustainable growth of the blue economy. Bangladesh should prioritize education and skills development programs to enhance the capacity of its workforce in areas such as marine sciences, maritime engineering, aquaculture, and tourism. This can be achieved through collaboration with universities, vocational training institutes, and international partnerships to foster knowledge exchange and skill transfer.
- **Developing Capacities:** Creating capacities is crucial for Bangladesh's Blue Economy to flourish. This entails giving local communities, company owners, and government representatives the tools and knowledge they need to create sustainable enterprises.
- **Raise Awareness and Promote Community Engagement:** Building awareness among local communities is very crucial to the growth of sustainable development in respect of the blue economy.
- **Maritime Security and Surveillance:** It must be ensured to protect and secure from illegal, unreported fishing practices, international smuggling, human and arms

trafficking, fish pirates, ocean-based crimes, ocean border infringements, non-traditional marine based securities and so on.

Conclusion

So far, Bangladesh has been viewed as a novel country to capitalize on the potentials of the blue economy in terms of facing newborn challenges and implementing sustainable practices. The position and contribution of Bangladesh blue economy to economic benefits, as well as the difficulties and the solutions to those difficulties, remain the major points of discussion of the study. Although Bangladesh has a lot of potential for long-term expansion and development in the blue economy, there are many obstacles it needs to overcome to reach its full potential. The core message is that a strategically governed blue economy can serve as a catalyst for economic diversification, climate resilience, and inclusive growth, in alignment with sustainable stewardship.

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Geopolitics and Foreign Policy of Bangladesh: Challenges and Opportunities

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Abstract: This study explores how geopolitics shapes Bangladesh's foreign policy, creating both challenges and opportunities. Using a qualitative approach, the research is based on content analysis of secondary sources such as books, journal articles, and policy papers. The findings highlight that Bangladesh's foreign policy is significantly influenced by its geographical position, surrounded by regional powers like India and China, and located near the Bay of Bengal—a strategic maritime hub. Geopolitics, understood as the impact of geography on politics and power relations, plays a central role in shaping Bangladesh's external engagements. The country must carefully balance its national interests amid regional rivalries, global power shifts, and economic interdependencies. While its location offers prospects for trade, connectivity, and regional cooperation, it also exposes Bangladesh to external pressures and strategic competition. The study concludes that geopolitics will remain a permanent and decisive factor in Bangladesh's foreign policy. Strategic adaptability, regional diplomacy, and economic pragmatism are essential for managing geopolitical realities and enhancing Bangladesh's position in both regional and global contexts.

Keywords: Geopolitics, Bangladesh, Foreign Policy, Regional Dynamics, Strategic Location, Opportunities

Introduction: Foreign policies are usually determined by the complex interplay of multiple factors. Foreign policy consists of the actions which a state undertakes to achieve its national interest in the global environment and fulfillment of national interest is the main goal of foreign policy. Bangladesh foreign policy has undergone different critical transition and phases for the last 50 years. Geopolitics is the study of the effect of geographical factors on politics. In other words, outstanding features of the physical location and resources of a country determine to a large extent its status in world politics. In fact, geography interplays with politics, power, economy, security and so on. Geopolitics is the planning of a nation's security policy on the basis of

geographic factors. Materialistically, geopolitics is the connection between political power and geography. Here statesmen and strategists are interested in the political and strategic importance of geography to states' pursuit for power. The focus of this paper is how geopolitics challenges Bangladesh's foreign policy and give opportunities. How does Bangladesh's geopolitical location affect its bilateral relations with India and China and rest of the world.

Methodology: The article is qualitative in nature. Content analysis is done in this research work. Data are collected from secondary sources such as books and different articles etc. The collected data are then processed and analyzed in line with the objectives of the study to reach a dependable conclusion.

The geographical location of Bangladesh is another dominant factor that influences on Bangladesh foreign policy. Bangladesh has a common border with India on the west, north and also in part of the east leaving only the south where the Bay of Bengal embraces the Indian Ocean, which makes the Bangladeshis feel 'India locked' (Hussain, 1989, pp. 99-101). Myanmar is linked to it on the eastern flank and, through Myanmar, Bangladesh is linked to the entire Southeast Asian region. In this way Bangladesh is a bridgehead between the South Asian and the Southeast Asian regions. Bangladesh is almost surrounded by India. Bangladesh cannot change it. The geopolitical importance of Bangladesh is immutable because of its location at the mouth of the Bay of Bengal, which links with the Indian Ocean. This strategic location Bangladesh attracts the attention of all big powers like India, USA, China and Russia. Foreign policy is not static. It is a dynamic process and the decision-making process would invariably take into account the changing realities both in the internal and external scene. To quote F.S. Northedge, "foreign policy constitutes an endless dialogue between the powers of continuity and the powers of change (Northedge, 1968, p. 11). Every state, whether large or small, projects an image to the outside world which is basically the reflection of its inherent values, principles, desires, interests and aspirations. Indeed, as foreign policy involves interactions with other actors on the international scene, it necessarily has in its operation the elements of uncertainty, frustration, and failure (Huque, 2002, p. 203). Geopolitical location of Bangladesh gives it both strength and weakness from different perspectives. As it is by location land locked by India it keeps Bangladesh in a disadvantage, but a little land boundary with Myanmar and its entrance in Bay of Bengal gives an advantage to its external orientation.

Bangladesh's options in foreign policy appear to be limited because of its geographical location, small size of the territory and weak economic and military power. At the same time, Bangladesh is sandwiched between the rising giants of Asia-China and India (Rashid, 2005, p. 36). It is apparent, in my view, that the conduct of foreign relations of such countries, such as Bangladesh, is a delicate balancing act.

Geopolitics is the planning of a nation's security policy on the basis of geographic factors. Analyzing these factors the geopolitician assesses existing areas of power and tries to relate a nation's foreign policy to them. John Kieffer has defined geopolitics in terms of application of "the social, political, economic, strategic and geographic elements of a state." (Roucek, 1954, p. 289). Bangladesh's geographic proximity to Nepal and Bhutan in the north, China in the northeast, and Burma in the southeast make it an attractive partner to all of them. For India, Bangladesh has in recent years emerged as its most important neighbor in the subcontinent—with strengthening strategic, political, and economic ties. Beyond its region, Dhaka is also a major contributor of forces for international peacekeeping (Mohan, 2021).

Challenges of Bangladesh Foreign Policy: Bangladesh, which came into being in December 1971 by successfully seceding from Pakistan, has added an important element in the South Asian diplomatic configuration. It is natural for a developing country like Bangladesh to face various challenges, both internal and external. "Our foreign policy always faced challenges, though perhaps in different forms. During the liberation war the main challenge was to win the support of the international community. After the independence the challenge was to win diplomatic recognition as assistance from the outside world for rebuilding the country. We managed to tackle those challenges well within our limited abilities." (The Daily Prothom Alo, 2019). In the present economic globalization world, Bangladesh is more vulnerable than it was in the past.

Challenge 01: The first and foremost challenge of Bangladesh's foreign policy is relations with India. Bangladesh assuaged India's worries concerning its volatile northeastern states and had also made progress in transit facilities. Yet, on the other hand, the Teesta water sharing problem remained unresolved despite promises from the Indian side. Geographic location may influence foreign policy decisions and behaviors if other international factors serve as constraints, which is proven existing world order system.

The challenge for Bangladesh is how to maintain a delicate balance of relations between China and India. Geography plays an important role in shaping India-Bangladesh relations. Bangladesh is surrounded by Indian Territory except for a short south-eastern frontier with Burma and a southern coast fronting towards the Bay of Bengal. Bangladesh and India are neighbours and have to live with each other. Nature has destined them to be such. There is no escape from it. The relations between the two countries should be friendly as there is no excuse for inadequate understanding of each other.

This imperative reflects the pressure of both external geopolitics and domestic politics. Both India and China tend to bring South Asian smaller countries under their sway and such countries become a diplomatic battleground between two Asian giants (Rashid, 2010, p. 124). Bangladesh's geopolitical location is heavily alluring to China's naval strategy in the Indian Ocean. It has been argued that China's pursuit for maritime power in the Indian Ocean is based on Mahanian model of naval strategy. Mahanian naval strategy, named after nineteenth century American naval strategist Alfred Mahan, stressed that economic vitality of the US would depend on overseas commerce; overseas commerce needed overseas bases; and bases needed protection by naval fleet that in turn would support the flow of trade (Mannan, p. 23). At present the changed South Asian geo-strategic scenario, Bangladesh's geopolitical importance increased due to three dominant factors. At first, Bangladesh began to be referred to as the third largest Muslim country in the world and as the second in the region. Second, Bangladesh's location within the 'geo-strategic frontier' of India, South Asia's most powerful country. The third is Bangladesh being in close proximity with China, Asia's largest power, considered a strategic rival of both the US and India (Mantoo, 2013, pp. 49-50). Bangladesh and U S should proceed ahead on the basis of their own interests and understanding.

If Bangladesh is perceived tilting to one, it may give misgivings to the other. Bangladesh cannot afford of having an imbalance of bilateral relations with two Asian giants as Bangladesh needs both of them. Once upon a time G.W. Choudhary has said regarding Bangladesh foreign policy that "a country like Bangladesh can only react but not act on any major international issue". (Narain, 1988, p. 21).

Challenge 02: Another diplomatic challenge is how to take advantage of geo-political situation of Bangladesh, regionally and globally. A country has to develop its foreign policy in the light of certain basic criteria or factors such as the geopolitical realities

of the region it is located in, its search for security, its needs and urges for economic development, its ideological and historical background and its religious affinities. Geography of a country is very important in formulating its foreign policy. "The geographical position of a nation is the principal factor conditioning its foreign policy and the principal reason why it must have a foreign policy at all". (Cambon, 1951, p. 2). Napoleon once said, "The foreign policies of all nations are based on geography". (Hill, 1963, p. 226).

Geopolitics may be a disadvantage when a country is landlocked or she shares common border mostly with one country. While sharing common border if she is in dispute relationship with her big neighbor, her foreign policy will be largely conditioned by the fear psyche (Huzen, 1995, p. xiv). Bangladesh's geopolitical location is characterized by her long border of about 1700 miles with two neighbors. With India she has common border of about 1550 miles and with Burma is about 123 miles. Though in the south, she has her own outlet to sea, but the funnel like shape of the Bay of Bengal puts her at disadvantage with India over sharing the maritime boundary. Bangladesh is not also gifted with any natural resource which has strategic value to external powers.

The flow of 54 common rivers from India into Bangladesh territory creates yet another disadvantage to Bangladesh. But the compulsion of geopolitics does not give Bangladesh any scope to ignore India as a reality. The security of the country-- military and economic dimensions-- will be vulnerable if geopolitical factors are not duly taken into consideration. Decision makers of a country are greatly influenced by geopolitical factors. In the case of Bangladesh, the geopolitical variables play an important role in foreign policy postulation.

The geo-strategic position of Bangladesh lends special importance to friendly relations with China which located only 90 kilometers from the Bangladesh border. Bangladesh's geographical location is such that she has practically only one neighbor-- India. She would, in fact, stand virtually isolated if on any issue her access to the Bay of Bengal is cordoned off by the powerful

Indian Navy with no parallel in the region. Such predicament is generally termed as tyranny of geography that has made Bangladesh geographically dependent on India.

Bangladesh's location, however, seems to render the least geostrategic importance to the extra-regional powers, especially the two superpowers. Former U.S. President

Jimmy Carter, during his Presidential visit to India, publicly acknowledged that "South Asia lies within the Indian ambit of power, a disclaimer which the rest of the countries except Pakistan can hardly disregard". (Hassan, 1989, pp. 52-53). Basically, it was since the George W Bush's government that the US has viewed Bangladesh through Indian eyes. One of the major reasons behind this is that the US wants to contain the influence of superpower China by ensuring Indian dominance in the region. China is not only Bangladesh's largest arms supplier, but it is now Bangladesh largest trade partner as well. As China rises as a global superpower, it has stepped up its investment in various development projects in Bangladesh too (Riaz & Parvez, 2021). Bangladesh has been playing a balancing game with India and China. Indeed, this is a dangerous and hard game because a slip in balance will mean enmity with one of the two. Due to proximity with China, if Bangladesh's foreign policy is independent and in keeping with the times, it can become a significantly important state. By utilizing the Bay of Bengal astutely, Bangladesh can become a hub of the Indo-Pacific economic corridor and play a role in connections stretching from Central Asia to Southeast Asia and China. Of course, Bangladesh must come forward in this regard.

Bangladesh's geographical location is such that she has practically only one neighbor-India. She would, in fact, stand virtually isolated if on any issue her access to the Bay of Bengal is cordoned off by the powerful Indian Navy with no parallel in the region. Such predicament is generally termed as tyranny of geography that has made Bangladesh geographically dependent on India.

Challenge 03:

Because of small size of the territory, there is no depth of territory and it could act as a disadvantage during armed conflicts. The sea frontage is small and the coast is of concave nature that limits its protuberance into sea that in turn adversely affect in claiming large marine areas of the Bay of Bengal. Deficient in mineral resources, natural disasters, such as floods and cyclones often occur with devastating impact on people and infrastructure of the country. The lack of superpower's strategic interests in Bangladesh increases its vulnerability to the strategic requirements of India that seeks the exclusion of outside power's involvement in South Asia.

Even from the viewpoint of building an effective military defense system Bangladesh suffers a number of serious geographical setbacks. First, the nature of topography is

clearly an indication of military weakness. Bangladesh has no natural barriers like mountains or big body of waters separating her from the outside powers. She is, therefore, easily vulnerable to any blistering foreign attack. Second, Bangladesh lacks territorial depth and hence she is incapable of pursuing an effective geo-military strategy for protracted warfare. Territorial depth is a prerequisite to achieve victory in modern military campaign. Therefore, geographical realities are more of a curse than a blessing for the preservation of national defense of Bangladesh. "It must not however be forgotten that as geographically and strategically located as Bangladesh and above all being almost totally dependent on foreign aid and assistance its maneuvering capacity is almost nil." Under such prevailing realities what geostrategic significance an India-locked Bangladesh can have both in and outside the region? As it is apparent, that, except being a minor irritant to India, Bangladesh is strategically almost a non-influential actor both in regional and extra-regional politics. This is a situation that directly undermines the foreign policy of Bangladesh.

Challenge 04: Geopolitics regarding the Indo-Pacific strategy as the US is now prioritizing it seriously. The Indo-Pacific strategy and Bangladesh geo-strategic significance are also behind US-Bangladesh relations deepening engagement. US want Bangladesh to join its Indo-Pacific Strategy. Bangladesh' s neutrality and balancing policy is also accommodative of US objectives in the region, as it will not pose threats to any rivals.

Bangladesh has also announced its vision in the form of Indo-Pacific outlook, which prioritizes inclusiveness and economic cooperation. It remains to be seen how the Indian vision and Bangladesh outlook can work side by side in the context of growing competition in the region. Prime Minister Narendra Modi has highlighted India' s interest for defense cooperation and modernization of defense equipment in Bangladesh. One only hopes that such cooperation will remain consistent with the foreign policy objective of Bangladesh. As the world faces unprecedented geopolitical and economic challenges following the pandemic and Russia-Ukraine war, Bangladesh needs to ramp up its diplomatic efforts for regional cooperation in South and Southeast Asia and beyond.

Opportunities of Bangladesh Foreign Policy:

Today Bangladesh has gained geopolitical relevance in the international arena. Bangladesh, which was once called a basket case, now has immense geo-strategic importance. Its geographic location in South Asia has made it an important country in the region. The main object of Bangladesh's foreign policy is to create around us an environment of peace, trust, and stability which would permit optimum utilization of our natural and man-power resources for economic, social, and cultural advancement. It is only in a climate of trust and peace that the creative forces of our people can be released and harnessed for improving the well-being of society. The geo-political importance of Bangladesh is so because of its location at the mouth of the Bay of Bengal, which links with the India Ocean. Actually, Bangladesh's robust strength is the very access to the Bay of Bengal, which compensates for many of its weakness (Halim, 1989, p. 9). In addition to Bangladesh's geographical proximity to the global power China and the regional power India, and the rivalry between these two countries in South Asia and the rest of the region, had added a new dimension to discussions on Bangladesh. This had given Bangladesh importance in recent times to the US and other global powers (Riaz & Parvez, 2021). Bangladesh's economic and social advancement over the past decades, despite changes in power and political unrest, has also caught the attention of the international community.

Bangladesh's strength lies in having a huge population, homogeneity of race, common language, communal harmony, fertile lands and availability of gas. Homogeneity and absence of feudal social structure have increased unity among people. Common language of the people is an asset because it avoids conflicts and social divisions. The majority of the Muslims of Bangladesh, although non-communal and tolerant to all faiths, is sentimentally tied with Islamic Umma (brotherhood) and wish to maintain intimate fraternal relations with Islamic countries. Bangladesh has a sea-frontage and it facilitates, among others, export and import of goods. Its physical compactness and availability of arable lands have greatly contributed supporting millions of people of the country. The country is a land of rivers that are used for navigation. The natural resources of rivers and sea (fish) are fully exploited by the people for their livelihood. The riverine terrain and monsoon rains have profound impact on any ground war being fought in the country. Gas resources have been a boon for the country. Since Bangladesh is a flood plain, occasional floods act as a natural fertilizer for lands. The country is strategically located between the seven north eastern Indian states and the

rest of India. The country provides river transit route to India and Nepal uses the territory for transiting their goods for exports and imports (Rashid, 2004, pp. 63-64).

Bangladesh is strategically located in relation to India's access to its north-eastern states, and is India's largest development partner. At the same time, China is now Bangladesh's largest trading partner, with economic engagement increasing between Beijing and Dhaka. The unique geographic location of Bangladesh which cuts the troubled North East region of India off from mainland constitutes a vital security weak point for India for the fact that the region shares border with China and the various insurgent groups are active within the region that are fighting against the Indian government for self-determination. In light of their experience in Indo-China war in 1962, the Indian defense planners consider the strategic chicken neck to be vulnerable and see Bangladesh to be the safest and the shortest route to transport military logistics to North East region in case of a military conflict between India and China in the future. A strategic corridor through Bangladesh is also seen as important to conduct fruitful military campaign against the insurgent groups in North East. The corridor through Bangladesh has economic significance as well because it is the most cost-effective route to connect North East with the rest of India for the transshipment of industrial goods to and from North Eastern states, which is significant to improve the economic condition of this land locked region.

Bangladesh, which is being regarded as a bridge between SAARC and ASEAN, also has enormous geographic advantages for its proximity to Myanmar and other South East Asian nations to promote inter regional economic, political and security cooperation. Bangladesh has one important locational advantage, viz., the access to the Bay of Bengal, and through this to the wider open seas and to the sea routes towards the strategically important regions such as East and Southeast Asia, on the one hand, and West Asia and the Middle East on the other. This geopolitical and locational advantage can be utilized by Bangladesh to its own benefit by drawing the attention of the outside world, i.e., through exploiting the same to serve its purpose.

Bangladesh is strategically located in relation to India's access to its north-eastern states, and is India's largest development partner. At the same time, China is now Bangladesh's largest trading partner, with economic engagement increasing between Beijing and Dhaka. Bangladesh is considered the gateway to Bay of Bengal with its 45000 sq. miles of sea territory in which lies valuable marine resources such as hydrocarbon, fisheries etc.

Despite her geographical handicaps vis-a-vis India, Bangladesh seems to possess some geostrategic importance in her South-Asian setting. First, Bangladesh commands access to the Indian Ocean through the lanes of the Bay of Bengal. It increases her foreign policy bargaining capacity vis-a-vis the outside world. Second, Bangladesh borders on the seven North-East Indian states, known as the North-East Frontier Agency (NEFA) which is witnessing insurgency and revolt for a long period. By virtue of her location Bangladesh divides the NEFA from the rest of India and thus has the potential either to ignite or cool down the turmoil in this part of Indian Union. India, therefore, needs a friendly country that would not be a cordon sanitaire for NEFA insurgents. This was, in fact, "one of the primary motivations behind Indian support for the creation of Bangladesh in 1971". Third, Bangladesh's role in South Asian sub-system also adds to her geopolitical importance. Almost all the smaller nations of South Asia are at odds in their bilateral relations with India and they are thus juxtaposed to their bigger neighbor. Any external powers hostile to India have the possibility to have a confident friend in Bangladesh.

Bangladesh is a very important South Asian country not only for its growing economy and trade but also for its strategic location - linking South and Southeast Asia and providing a gateway to the Bay of Bengal, and increasing global standing. These factors also attract the Western world to Bangladesh. Located strategically as Bangladesh is on the top of the Bay of Bengal, Bangladesh is connected to the mighty Indian Ocean and by extension, the Pacific. Economic cooperation in the vast maritime waters, therefore, is a logical choice for us. Bangladesh is a key strategic maritime nation. We are a Bay of Bengal nation. We are an Indian Ocean nation. Bangladesh's strategic location provides a unique position and strength to Bangladesh as a key strategic access provider to the Bay of Bengal or access denial to the Bay of Bengal. These are Bangladesh's strengths that must be fully explored and understood and therefore, joint cooperation should be brought around areas of the Bay of Bengal and the Indian Ocean area. Promoting multilateralism through regional, sub regional and transregional cooperation has been a motto for Bangladesh throughout its existence as a nation state.

Conclusion: Foreign policy is essentially an extension of domestic policy and therefore is formulated consistent with national interests and aspirations. Given the geopolitical situation of Bangladesh, the conduct of foreign relations has not been easy. It appears that Bangladesh has to balance its priorities in exploitation of its natural resources and geographical location to play power politics in the regional and

global environment. A foreign policy is successful if it is proactive and result oriented. Once upon a time ancient Indian statesman and philosopher Kautilya said that “the welfare of a state depends on an active foreign policy”. It is harsh reality that Geopolitics will remain an important consideration and influence in Bangladesh foreign policy forever. Bangladesh’ s foreign policy must not be moulded by domestic politics or by ambitious to stay in power. In this regard long term national interests must be given priority. Bangladesh has so far been practicing a balanced foreign policy strategy. Exploring new opportunities in this new geopolitical pendulum is crucial to surviving the challenges that lie ahead.

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Translation as Re-creation: Khaliquzzaman Elias and the Ethics of Literary Transformation

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Abstract: This study examines the philosophy and practice of literary translation through the lens of Professor Khaliquzzaman Elias, one of Bangladesh's most distinguished translators. Using an in-depth interview conducted by Razu Alauddin and reframed for scholarly analysis, the article situates Elias's work within contemporary debates. The paper places Elias's writings in the broader context of authorship, digital ethics, postcolonial theory, and translation studies. According to Elias, translation is a creative act of reinterpretation that resists literalism and the intrusion of artificial intelligence into literature while balancing cultural fluency and faithfulness. The paper suggests that Elias's translation model is a crucial intervention in current discussions about authorship, translation ethics, and machine-generated creativity because it aligns his principles with theoretical frameworks like Skopos Theory. The study presents novel perspectives on postcolonial translation practice and promotes the notion that translation is an independent literary form that reflects intellectual depth, cultural sensitivity, and humanistic resistance rather than being a derivative.

Keywords: Skopos Theory, translation, authorship, fidelity, cultural adaptation, artificial intelligence, and translation ethics

1. Introduction

1.1 Translation Beyond Transference

The process of translating one language into another has frequently been limited to a binary conflict between fluency in the target language and faithfulness to the source text in traditional translation discourse. For centuries, translation practice has been influenced by this dichotomy, which dates back to the classical arguments between Cicero and Horace. But this framework seems more and more simplistic in the twenty-first century. Today, translation is a deeply interpretive, creative, and ethical process that is influenced by the translator's cultural positioning, ideological beliefs, and aesthetic sensibilities. It is not just a technical act of linguistic substitution.

This reconceptualization of translation is particularly crucial in postcolonial societies such as Bangladesh, where the very act of translation is deeply entangled with questions of national identity, cultural representation, and political agency. In these

situations, the translator frequently shows up as a resistance thinker, cultural strategist, and language mediator. This fact highlights the need for alternative translation models that transcend Eurocentric frameworks and take into account regional approaches based on linguistic plurality, historical awareness, and cultural empathy.

1.2 Background of the Study

One of Bangladesh's most well-known and successful literary translators, Professor Khaliqzaman Elias, makes a significant contribution to this developing conversation. With more than seventeen translated books—including works by Achebe, Swift, Rousseau, Frazer, Kazantzakis, Akutagawa, and Márquez—Elizabe has proven to have a remarkable ability to use subtle and artistic translation to bridge wildly disparate literary traditions. His translations encompass a complex negotiation between languages, ideologies, and worldviews rather than just linguistic rendering.

Elias, a Howard University PhD holder in Comparative African-American Literature, has long been interested in the cultural, philosophical, and political ramifications of translation. Elias challenges prevailing notions of fidelity, originality, and authorship through his practice and reflections, which were first documented in a comprehensive interview by Razu Alauddin (2025). He contends that translation is an act of re-creation rather than a derivative one, requiring creativity, cultural awareness, and a resistance to machine automation or literalism.

His viewpoint is especially pertinent now, as discussions about machine-generated texts, artificial intelligence, and technocratic approaches to literary problems become more heated. Elias continues to be one of the most outspoken literary critics of AI, characterizing it as a danger to human creativity and intellectual integrity. Additionally, he supports the use of Skopos Theory, which places more weight on the translation's function and goal in the target culture than strict literalism or unthinking foreignization.

1.3 Objectives of the Study

- i. to explore Khaliqzaman Elias's translation philosophy as articulated in his interview and embodied in his translated works—particularly his views on fidelity, re-creation, and the translator's ethical responsibility.
- ii. to contextualize his practice within contemporary translation theories, such as Skopos Theory, foreignization/domestication, and the translator's visibility, thereby situating a South Asian voice in a global conversation.
- iii. to analyze his critique of artificial intelligence in translation and literature, positioning it within broader ethical concerns about automation, authorship, and cultural integrity.

1.4 Rationale of the Study

The need to reconsider the purpose and philosophy of translation from the perspective of a South Asian practitioner-scholar is what spurred this investigation. Elias offers a compelling counterpoint to the large portion of translation theory that is dominated by Western voices and contexts; his writings come from the nexus of anti-colonial politics, Bangladeshi linguistic reality, and international literary engagement. His opinions challenge the idea that fidelity is the same as linguistic faithfulness and support ethical and cultural fidelity, which is the dedication to preserving the original text's spirit, rhythm, and emotional depth while adhering to the target culture.

Elias's emphasis on the indispensable value of the human translator adds a much-needed ethical dimension to modern translation studies at a time when artificial intelligence (AI) threatens to mechanize authorship and stifle creativity. Furthermore, a literary consciousness that is both grounded and expansive is revealed through his inventive use of dialects, folk idioms, and localized metaphor.

This study seeks to fill a significant gap in both regional scholarship and global theory by recording and evaluating Elias's ideas and writings. In addition to addressing well-known theoretical frameworks like Skopos Theory, foreignization, and authorship ethics, it also expands these discussions into new areas influenced by South Asian political history, educational practices, and cultural conflicts.

This paper argues that Khaliqzaman Elias redefines translation as a mode of re-creation—that is morally sound, culturally relevant, and incredibly resilient to both digital automation and linguistic literalism. His work offers a dialogic, anti-colonial, and unapologetically human South Asian translation model by combining faithfulness with creative equivalency.

2. Literature Review

2.1 Fidelity vs. Fluency and Beyond

A fundamental conflict in translation studies is the age-old argument between fidelity and fluency. The traditional contrast between sense-for-sense (*sensum de sensu*) and word-for-word (*verbum pro verbo*) translation, which was examined by Cicero and Horace, has influenced literary translation theory as well as practical judgement. But scholarship from the 20th and 21st centuries has made this dichotomy much more complex.

In *The Translator's Invisibility* (1995), Lawrence Venuti criticizes the prevalent Anglophone inclination for "fluent" translations that eliminate any indication of foreignness. By claiming that fluency frequently results in cultural appropriation and the repression of the translator's agency, he reveals the ideological purpose of this invisibility. Venuti advocates for a foreignization strategy in which translators

preserve cultural and linguistic markers that highlight diversity and stimulate critical thought.

Parallel to this, Antoine Berman (1985) presents the idea of "ethnocentric violence," emphasizing the ways in which domesticating translation techniques distort the original text. Even at the expense of reader comfort, Berman promotes translation that avoids such violence by maintaining semantic complexity and linguistic opacity.

In contrast, a more functionalist approach to translation studies was brought about by Hans Vermeer's Skopos Theory (1989). In the target culture, Vermeer moves the emphasis from textual accuracy to the translation's goal (skopos). Particularly when translating across significant linguistic and epistemic divides, this change permits creativity, adaptation, and cultural resonance. Skopos Theory offers a useful framework for translators looking for relevance without reduction in regions like South Asia, where the source and target languages frequently originate from drastically different cultural grammars.

Thus, while departing from strict literalist practices, Khaliqzaman Elias's translation philosophy—in particular, his emphasis on cultural equivalency over literal fidelity—intersects with both Venuti's support for visibility and Skopos Theory. He refers to a third space beyond fidelity and fluency as "re-creation" because of his imaginative use of idioms and metaphors, his awareness of emotional tone, and his refusal to erase cultural specificity.

2.2 Postcolonial and Political Translation

In postcolonial settings, translation is a profoundly political act rather than merely an artistic one. According to academics like Susan Bassnett and André Lefevere (1990), "translation is rewriting," an action that is invariably entwined with institutional control, ideology, and power structures. Cultural narratives are filtered, reframed, and occasionally subverted during the formulation process of translation.

From a South Asian viewpoint, Harish Trivedi (2007) expands on this claim by demonstrating how colonial governments employed translation to impose Western epistemologies and create linguistic hierarchies. But he also highlights how anti-colonial writers and thinkers used translation as a tool for reclamation and resistance. According to Trivedi, postcolonial translation entails re-voicing international texts in regional dialects as well as recovering indigenous voices.

By proposing the idea of "translation as empowerment," Maria Tymoczko (2003) broadens this viewpoint. She sees the translator as a cultural activist who can challenge Eurocentric universals, reframe prevailing narratives, and elevate marginalised voices in addition to serving as a linguistic bridge. Tymoczko specifically highlights the politics of selection, including which texts are selected for translation, by whom, and for what reason.

Khaliquzzaman Elias's translations of *Arrow of God*, *A Man of the People*, and *Early Stories by Sholokhov* during the Bangladesh Liberation War exemplify this political agency. His decision to translate politically resonant texts during times of national struggle positions him squarely within this postcolonial tradition of translation as discursive and material resistance. His work does not merely introduce global literature to Bengali readers; it reactivates those works as mirrors, critiques, and counter-narratives relevant to local struggles.

2.3 Translation and AI: The Human vs. the Mechanical

Authorship, creativity, and the role of human labor are among the new ethical and philosophical issues brought up by the digital turn in translation studies. The widespread use of AI-based platforms like ChatGPT and machine translation tools like Google Translate has sped up access while simultaneously undermining the human-centered nature of literary creation.

This conflict is examined by Michael Cronin (2013) in *Translation in the Digital Age*, where he lists the advantages and disadvantages of technology. Cronin concedes that machine translation can help with accessibility and speed, but cautions against its reductionist inclinations and its incapacity to convey cultural subtext, emotional nuance, or semantic depth—qualities that characterize literary translation.

Even more critical is Roopika Risam's (2018) work on postcolonial digital humanities. She warns that when data sets are Eurocentric or insensitive to linguistic variance, digital tools frequently flatten epistemic complexity and eliminate marginal voices. She promotes an ethical digital practice that emphasizes human mediation and cultural diversity.

Elias makes a compelling and morally sound argument against AI. He views the use of translation and literature produced by AI as a direct threat to human creativity rather than as a form of help. His assertion that publishing works written by AI is "a punishable offence" highlights the ethical aspect of literary authorship. He places himself within a larger humanist tradition that upholds literature as an ethical, intellectual, and emotional craft rather than just an algorithmic output by cautioning against the rise of "fake authors" and "dishonest creativity."

Thus, Elias's stance contributes to the discussion by offering an anti-technocratic, South Asian viewpoint on authorship that is based on linguistic complexity, political experience, and the writer-translator's moral responsibility.

3. Methodology

The qualitative, interpretive methodology used in this study is based on critical cultural studies, textual analysis, and narrative inquiry. The primary source of data is an extensive, translated interview with Professor Dr. Khaliquzzaman Elias, which was

first done in Bengali by essayist Razu Alaaddin and translated and modified for scholarly purposes by Rahman M. Mahbub. Elias discusses his translational philosophy, innovative techniques, and ethical considerations in the interview, which is regarded not only as a testimony but also as a theoretical text in and of itself.

3.1 Dialogic and Hermeneutic Approach

Since Elias's reflections are seen as a component of a continuous dialogue with prominent figures in translation theory, postcolonial studies, and digital ethics, the research is intrinsically dialogic (Bakhtin, 1981). Elias's viewpoints are contrasted with those of Venuti, Vermeer, Tymoczko, Trivedi, Cronin, and others through comparative close reading. By amplifying voices from the Global South within prevailing scholarly frameworks, this approach enables the co-construction of theory from the "periphery."

According to Gadamer (1975), the study takes a hermeneutic approach, emphasizing subjective meaning, historical embeddedness, and contextual awareness. Elias's statements are interpreted in light of the linguistic, political, and cultural contexts that influence them rather than being decontextualized aphorisms.

3.2 Narrative Inquiry and Textual Analysis

The interview is analyzed as an experiential and epistemic document, drawing on Clandinin and Connelly's (2000) narrative inquiry model. It is possible to read Elias's life story, career decisions, and translation practice as embedded narratives that both inform and reflect his theoretical position. The underlying presumptions and ideologies guiding his translation practice are exposed through an analysis of the interview's flow, metaphors, and recurrent themes.

Elias's language choices, analogies (such as bees carrying whole flowers and Brazilian cannibalism), and rhetorical devices are examined through textual analysis, as defined by Norman Fairclough (2003). Elias's use of metaphor, contradiction, and intertextuality to create meaning is specifically examined in this analysis.

3.3 Critical Interpretivism

This study adopts the critical interpretivism outlined by Creswell (2013), which holds that knowledge is socially constructed and influenced by power. It aims to highlight under-represented knowledge forms and recognizes the positionality of the interpreter (the researcher) as well as the translator (Elias). The study adopts a reflexive epistemology, where the reader is encouraged to critically interact with both the form and the content of Elias's discourse, as opposed to aiming for objective neutrality.

3.4 Source and Data Integration

In addition to the primary interview, the study draws on:

- Elias's published translations, especially *Arrow of God*, *Gulliver's Travels*, *The Power of Myth*, and *The Golden Bough*
- His prefaces and commentaries, which function as standalone essays
- Secondary scholarly texts on translation theory, postcolonial literature, and digital ethics
- Open-access databases, including academic journals, translator forums, and university archives for cross-referencing theoretical claims

This multi-source approach ensures a rich triangulation of data and theory, enhancing both the credibility and depth of the research.

4. Analysis

4.1 Translation as Re-creation: The Death of Literalism

Khalikuzzaman Elias deviates drastically from conventional translation orthodoxy with his categorical rejection of literalism. He draws attention to the ridiculousness of giving surface-level word equivalency precedence over poetic and cultural resonance by likening literal translation to "bees carrying whole flowers into the hive." His translation of "Fools rush where angels fear to tread" as "হাতি ঘোড়া গেল তল, ভেড়ায় বলে কতো জল" is not just a replacement; rather, it is a cultural recalibration. This type of rendering accomplishes two goals: it is idiomatically and linguistically coherent in the target language while maintaining emotional authenticity to the original.

Skopos Theory, which prioritizes function over form, is in line with Elias's approach. He sees the original text as raw material to be reinterpreted through the cultural codes of the intended audience rather than as sacred. Octavio Paz's theories, which characterize translation as the creation of a new poem rather than a copy, further support his viewpoint. Elias views translation as a rebirth rather than a mechanical transfer, but rather as an aesthetic and affective exchange.

4.2 Translation as Political Agency

Elias's political awareness permeates every aspect of his translation methodology. His choice to translate Mikhail Sholokhov during the Bangladesh Liberation War was an act of literary resistance as much as an aesthetic one. Sholokhov's writings had revolutionary overtones that spoke to the country's fight for independence. Elias

helped spark a national dialogue about justice, autonomy, and identity by bringing these works to Bengali readers at a turbulent time.

His translations of Chinua Achebe's *Arrow of God* and *A Man of the People* further support his view that literature can be used as a vehicle for political discourse. Elias shares Achebe's view of storytelling as a tool for decolonization. He chooses books that challenge colonial legacies, examine corruption, and highlight indigenous stories. According to Elias, translation thus turns into an ideological act that promotes intellectual independence and cultural resistance.

4.3 Translation and AI: The Ethical Crisis

Elias becomes an outspoken opponent of machine translation and artificial creativity in the face of the increasing dependence on AI-generated content. Although it may seem extreme, his claim that publishing literature created by AI should be "a punishable offence" highlights a serious ethical issue. Elias contends that writing, especially literary translation, is a fundamentally human activity that calls for moral discernment, historical knowledge, intuition, and emotion.

Elias completely opposes the mechanization of authorship, in contrast to Michael Cronin (2013), who investigates AI as an adjunct tool for human translators. His criticism supports Roopika Risam's (2018) worry that AI systems frequently eliminate marginalized voices and flatten cultural nuances. According to Elias, AI is incapable of suffering, remembering, or imagining culturally—qualities necessary for accurate translation. His stance insists that we uphold the human element of literary production and calls for a reconsideration of authorship in the digital era.

4.4 Skopos vs. Foreignization: Theoretical Commitment

Although Elias expressly supports Skopos Theory, he criticizes some forms of foreignization. Elias thinks that foreignization can result in incomprehensibility, whereas Venuti advocates it as a means of preserving the otherness of the original text. He makes the case for a careful middle ground that balances reader accessibility with cultural integrity.

Although more successful, Manabendra Bandyopadhyay occasionally exhibits moments of excessive fidelity, while he criticizes William Morris's translations as being unduly antiquated and out of touch with modern readers. Elias uses Oswald de Andrade's 'Brazilian Cannibalism' as a metaphor for his translation process, which involves thoroughly understanding the source material before rephrasing it in the powerful vernacular of the target culture. Meaning is amplified rather than diluted by this process.

4.5 Folk Forms, Dialect, and Cultural Nuance

Elias's profound awareness of social class, cultural texture, and emotional tone is evident in his translations of dialects and folk idioms. Elias uses rural and regional Bengali, similar to Achebe's use of Igbo-inflected English, to maintain his characters' speech patterns and worldview. His method transcends literal equivalency and enters the field of linguistic anthropology, where language serves as a marker of identity and belonging in addition to being a means of communication.

Elias preserves the original's rhythm and melody when translating songs, conversations, and oral histories. He makes sure that the translated text appeals to local sensibilities by paying close attention to form, including rhyme, cadence, and idiomatic patterns. Because it affirms the legitimacy of folk and regional voices in the literary canon, this fidelity to cultural nuance is also a political act.

4.6 Translation and Education Policy

Elias views translation as a tool for nation-building, which is reflected in his thoughts on language policy. He berates Bangladesh for not putting into practice a teaching methodology that is based in the native tongue and enhanced by excellent translations. Elias contends that linguistic sovereignty is the first step towards intellectual independence, drawing on the Chinese and Soviet revolutions as examples.

According to this perspective, translation is essential to educational reform rather than a byproduct. The nation can promote a more inclusive, approachable, and epistemologically based curriculum by translating important international texts into Bangla. According to Elias's model, translators are architects of knowledge dissemination who influence how future generations read, think, and dream.

5. Findings

Several important conclusions are drawn from the analysis:

Translation as Authorship: Elias's approach shows that the translator is a co-creator. He challenges the concept of secondary authorship by creating meaning rather than just transmitting it.

Ethical and Practical Rejection of Literalism: Elias demonstrates that cultural and emotional accuracy are more important for successful translation than formal fidelity.

Skopos Theory of Functionality: He uses a reader-centered approach that emphasizes meaning and comprehensibility, which aligns with functionalist theories.

His selection of texts and timing demonstrate how translation can be used to oppose colonial and authoritarian forces.

AI as a Philosophical Threat: Elias offers a unique literary critique of AI from a South Asian perspective, based on humanism, ethics, and aesthetics.

Dialects as Identity Markers: He reasserts marginalized identities in mainstream literature through the strategic use of folk forms.

He rethinks translation as a transformative instrument for national development and education policy in his book *Translation for Pedagogical Reform*.

In the following ways, this paper adds novel perspectives to translation studies:

Localized Theory Building: Using the lived and thought experiences of a Bangladeshi translator, it reinterprets global theoretical models (Skopos, foreignization, authorship).

Elias is treated as both a subject and a theorist whose practical choices are epistemologically generative in this practitioner-theorist synthesis.

Anti-Technocratic Ethics: It makes a unique, locally based ethical case against the application of AI to the production of literature.

Linguistic Anthropology in Translation: It suggests a paradigm in which folk idioms, dialect, and rhythm are essential to the translation process rather than merely decorative.

Relevance to Policy: It connects translation to more general discussions about decolonization, education, and national identity.

6. Conclusion

This study positions Khaliqzaman Elias as a powerful voice in the international translation discourse. He is a cultural philosopher, political activist, and ethical thinker in addition to being a proficient translator. He is a champion of human-centered literary ethics because of his opposition to AI, rejection of literalism, and dedication to cultural intelligibility.

In Elias's hands, translation becomes a practice of re-creation, resistance, and renewal. It is a space where literature is born again—not copied, but culturally reimagined. In a time of accelerating technological intrusion into the humanities, Elias's work reminds us that language is not just a tool—it is a soul, and the translator is its careful steward.

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