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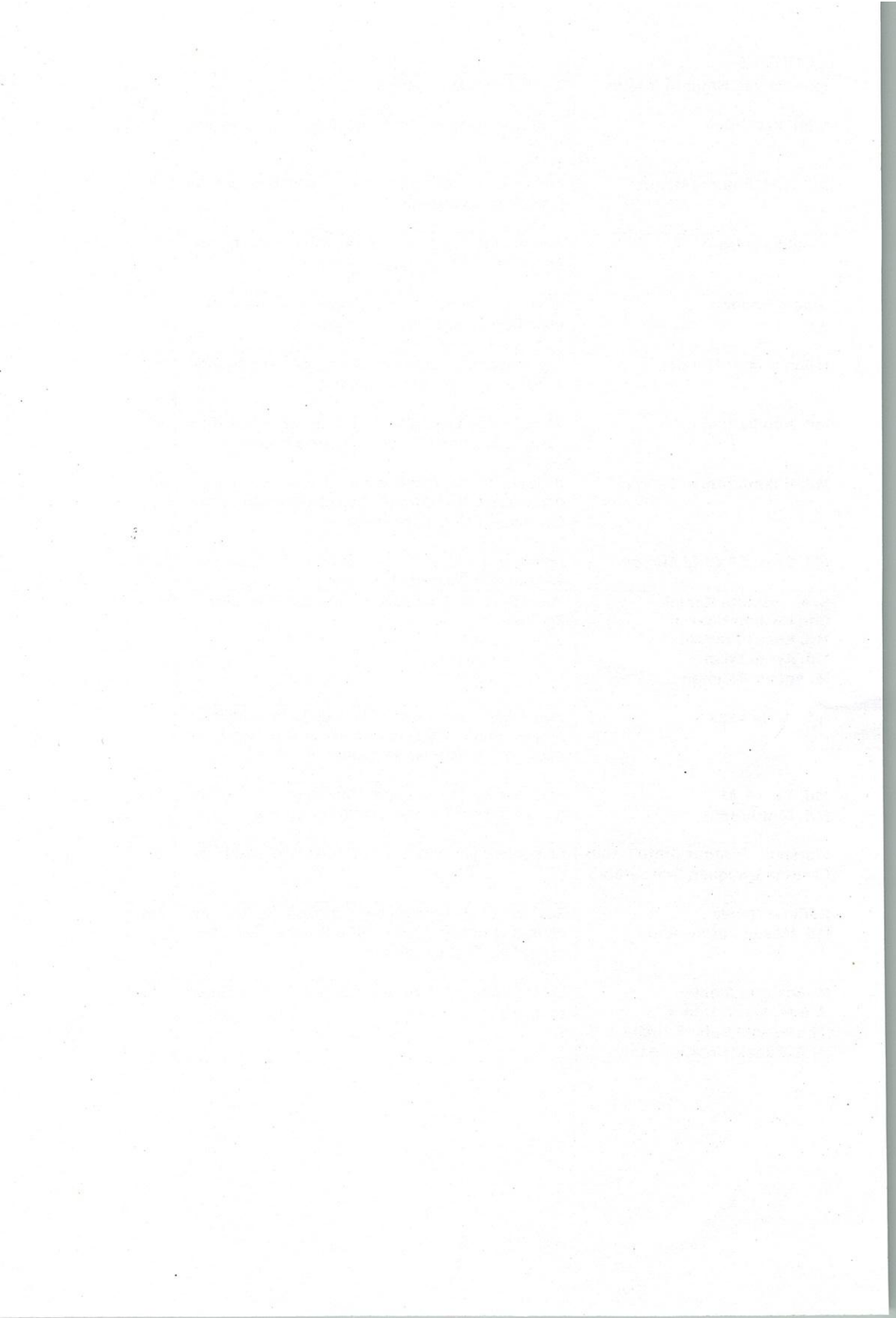
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THE HABSHI RULE IN BENGAL

Mohammad Najimul Hoque*

Abstract: The Habshi rule, in general, was far from congenial for the welfare of the country, for it had fallen into a state of anarchy and disorder as a result of constant political murders, frequent changes of rulers and misrule and tyranny. In other words, murder, coup, conspiracy against the Sultans were at the centre of their minds and activities. Though there were found some architectural establishments but these are not mentionable in comparison with the popular or famous rulers.

Introduction

In Bengal, where Habshi slaves arrived directly by sea, it is recorded that the Ilyas Shahi Sultan Rukn al-Din Barbak Shah (1459-74), maintained some 8000 African slaves mainly for military purposes, many of whom were raised to high rank. They became dangerously powerful under the rule of Jalal al-Din Fath Shah (1481-1487) who, for taking measures against them, was assassinated by the Habshi commander of the palace guards, the eunuch Sultan Shahzada; the latter usurped the throne as Barbak Shah, the first of a succession of Habshis who ruled Bengal from 1487 to 1493. Barbak Shah was killed after he ruled of about six months by the Habshi army commander Amir al-Umara Malik Andil to avenge his master's murder; he was persuaded to ascend the throne himself as Sayf al-Din Firuz, and ruled with ability and generosity. He in turn was assassinated in a palace plot and succeeded by an infant king of dubious ancestry; the real power was in the hands of the Habshi regent Habash Khan, who was soon murdered by another Abyssinian, Siddi Badar called Diwana, who succeeded as Shams al-Din Muzaffar Shah; he subjected Bengal to reign of terror and extortion, and at first only the wisdom of his Arab wazir Ala-Din Husyan enabled him to continue. The wazir was king, as Ala al-Din Husayn Shah, in 1493, and shortly thereafter expelled all Africans from Bengal; most of them eventually made their way to Gujrat and the Deccan.

Origin of the term Habshi

The term 'Habshi' was used in India for those African communities whose ancestors originally came from Abyssinia, although some doubtlessly sprang from the slave troops of the neighboring Muslim countries. The majority, at least in the earlier periods, may well have been Abyssinian, but certainly the name was applied indiscriminately to all Africans¹, and in the days of the Portuguese slaves-trade with India many such Habshis were, in fact, of the Nilotic and Bantu races.

There are at least a couple of theories to explain the origin of the terms Siddi and Habshi, which is what Siddis were called in parts of western India. Most experts agree that the word Habshi comes from the Arabic word Habashi, from the Ethiosemitic word

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¹ Abdul Karim, *Banglar Ithihash-Sultani Amal (History of Bengal- Sultanate period)*, Dhaka: Jatio Grantha Prokashan, 1999. p. 286.

Habesha, meaning Abyssinian (Ethiopian). In other words, the term Habshi is an Arabic word for an Ethiopian or Abyssinian, while the term Siddi can be literally related to the Ashraf identity 'Sayed' which means my Lord, or direct descendants of Prophet Muhammad (SM). Most of the Habshi came from pagan areas in Western southwestern Ethiopia that were often raided for slaves by the (Habesha) Christian highlander's lands often outside of the areas subject or vassal to the Ethiopian emperor.² Similar to the evolution of the term Ethiopia, the term Habasha in Arabic though referring specifically to Ethiopia and Ethiopians was often applied to describe all black peoples. One theory of the origin of Siddi is that, after conversion to Islam, some Habshi called themselves Sayyadi (descendants of Muhammad), from which came Siddi. Some scholars claim that the word Siddi is an expression of respectful address commonly used in North Africa³, like Sahib in India or Sir in England. Specifically, it is said to be an honorific title given to the descendants of African natives in the west of India, some of whom were distinguished military officers and administrators of the Muslim princes.

History of Habshi

Habshi mostly came from Africa and some were sold as slaves in the Indian Subcontinent by Arab merchants in medieval times. In Western India (Gujarat and Maharashtra), the Habshi gained a reputation as being physically powerful and fiercely loyal. This made them popular amongst the local princes as mercenaries. Despite their reputation as good fighters, many were also used as domestic servants and farm labourers.⁴ Some Siddi slaves escaped into the forests to form their own community.

In fact, small Siddi kingdoms were established in western India in Janjira and Jaffrabad as early as the twelfth century. The island of Janjira was formerly called Habshan, meaning the land of the Habshis. A few rulers of Bengal in the 15th century were of Habshi descent.⁵ The Habshis also played an important role in the history of Western India, particularly in the struggle of the Marathas.

The Habshi slaves were the most expensive and served their masters as butler and cook, musician, barber, house guard, and so on. Their status among slaves was so high that they were even consulted by their masters in the affairs of business, politics and household management. The Habshi slaves were the commonest among the eunuchs in the harem of the aristocracy. In the eighteenth and early nineteenth centuries, slaves were imported to Bengal market not only from Africa, but also from Arabia, Malaya, China, Arakan, Assam and Nepal. The Arab slaves were mostly eunuchs. Slaves were also exported from Bengal.⁶ The slaves of Bengal origin were in demand as plantation labour in the European overseas colonies.

African migration into the Indian Sub-Continent occurred in both voluntary and involuntary waves. However, India's most ancient existing inhabitants known as *Adivasis* (aborigines) are also of African origins. This has been recently confirmed on anthropological, linguistic and biological foundations. In the 15th century, a great Abyssinian dynasty ruled over the entirety of Bengal under a single unified Muslim sultanate. Moreover, this episode of Abyssinian rule marked one of the most unique eras

² A k M Yakub Ali, *Aspects of Society and Culture of the Varendra*, 1200–1576 A.D, Rajshahi, 1999, p.57.

³ Stan Goron, "The Habshi Sultans of Bengal". *African Elites in India-Habshi Amarat*. ed. Kenneth X. Robbins and John Mc Leod. Ahmedabad: Mapin, 2006, p.42.

⁴ Shanti S. Ali, *The African Dispersal in the Deccan*. New Delhi: Orient Longman, 1996, p.89.

⁵ R.R.S.Chauhan, *Africans in India-From Slavery to Royalty*. New Delhi: Asian Publication Services, 1995, p.96.

⁶ Ghulam Hussain Salim, *Riyaz-us- Salatin (A History of Bengal)*, tr. Abdus Salam, Delhi, Idarah-i- Adbiyat-i-Delhi, 1975, p.51.

of Bengal's history, where the Habshi rulers imparted great benevolence to the poor and destitute, as well as demonstrated impressive patronage of the arts, literature, architecture, science, and medicine.⁷ Africans also visited India as free people- as merchants and ambassadors from East African states.

Background of Habshi Rule in Bengal

Before delving deep into the chronology of the Abyssinian dynasty, the necessary background information about the diverse categories of Indian Muslims are presented here in order to avoid confusion in about later sections of this paper. It is historically recognized that the members of the Islamic faith first embarked upon organized military campaigns into the Indian Subcontinent with the Arab conquest of Sindh in the 8th century. It was much later, during the end of the 12th century (1192-1206) that North India was effectively conquered and the Delhi sultanate, or kingdom was established. During the 14th century (1338-1407) the Delhi sultanate fractured into six independent sultanates, located in Malwa, Gujarat, Jaunpur, the Deccan, Khandesh, and Bengal. It was during this period that a large number of Ethiopians entered into the Indian Subcontinent as slaves, soldiers, eunuchs, and as military administrators.⁸

However, Islam permeated into Bengal during the 13th century with the influx of Islamic merchants, preachers, Sufi mystics, and military personnel. In the pre-Mughal period, medieval Bengal was deeply influential as a succession of independently ruled Sultanates, led by Ashraf rulers, the most prominent of them being the two dynasties of Ilyas Shah. Shamsuddin Ilyas Shah founded the first dynasty, ruling through 1342-1359 A.D. and later the dynasty was resurrected by Nasir-uddin Mahmud in 1437 A.D. merging a substantial portion of East Bengal with Western Bengal and Orissa. Evidently, in this period many military fought were ensured during the consolidation and expansion of the dynastic domain.⁹ Nasir-uddin was succeeded by his son, Barbak Shah (1459-1474 A.D.) and later by Shams-uddin Yusuf Shah (1474-1481 A.D.).

Later, the nobles placed Nasiruddin, a descendant of Sultan Shamsuddin Ilyas Shah, on the throne of Bengal in 1435-36 A.D. Thus the Ilyas Shashi dynasty was restored. Assuming the title Nasiruddin Mahmud Shah, the new sultan reigned peacefully for about twenty-four years. He died in 1459-60 A.D. and was succeeded by his son Ruknuddin Barbak Shah. He had a fancy for Abyssinian slaves, and recruited them in large numbers. The Habshi slaves, consequently, became a powerful factor in Bengal politics. Barbak Shah died in 1474 A.D. and was succeeded by his son Shamsuddin Yusuf Shah.

After Yusuf's death (1481 A.D.), the nobles placed his son Sikandar II on the throne. But the nobles deposed him after a nominal reign of a few days and offered the throne to Fath Shah, son of Nasiruddin Mahmud Shah. Fath Shah assumed the title of Jalaluddin Fath Shah. Towards the close of his reign, the Abyssinian slaves became very powerful in the court of Bengal and occupied most of the important positions. Fath Shah was murdered in 1487 A.D. by one of his slaves, named Barbak. With the death of Fath Shah the rule of the Ilyas Shahi dynasty came to an end.¹⁰

There is much speculation as to how the second Ilyas Shah dynasty concluded and how its particular ending coincides with the beginnings of the Habshi episode. The frequent view propagated by many authors of Bengali history texts is that the Abyssinian

⁷ Shanti S. Ali, *The African Dispersal in the Deccan*. op.cit., p. 96.

⁸ *Encyclopedia of Islam*, Vol.111, Netherlands: E.J. Brill, 1979, p.572.

⁹ Shanti S. Ali, op.cit., p. 98.

¹⁰ Imtiaz Ahmad ed., *Caste and Social Stratification Among Muslims in India*. 2nd ed. New Delhi: Mohohar, 1978, p.27.

palace guards in 1487 A.D. assassinated the last ruler of the Ilyas Shah dynasty¹¹ and subsequently seized power.

Recent evidence has cast doubt upon the simplicity of such an occurrence. Over 8000 Abyssinians were well-known members of the Ilyas Shah administration and carried out vital civic duties such as supervising and building Islamic schools, acting as court magistrates, collecting tolls and taxes, law enforcement, and the official overseers of the trade and commerce sector. Consequently, this elicited much antagonism from the upper caste Hindu community since it violated the orthodox Brahmin standards of Manu by giving power to African people, or non-Aryans, which is considered a serious crime in the Hindu edicts.¹² Many prominent Ashraf families harbored similar sentiments about the increasing power of the Habshis, ultimately causing many to conspire towards their demise. Many Habshis responded to this denigration by banding together along with the chief eunuch of the main palace, Barbak Shahzada to assassinate the brother of Barbak Shah, Jalal al-Din Fath Shah, who detested the Habshis and was seeking actions towards their removal. The strike was completed and Barbak Shahzada took the throne under the name of Ghyath al-Din Barbak Shah.¹³ Hence, these events set into motion the reign of the Habshi Sultans of Bengal.

The Habshi Episode in Bengal

The brief reign of the Habshi dynasty of Bengal consisted of four rulers over a six-year period:

1. Ghiush al-Din Barbak Shah (1487-1488)
2. Saif al-Din Firuz Shah (1488-1490)
3. Qutb al-Din Mahmud Shah (1490-1991)
4. Shams al-Din Muzaffar Shah (149 1-1493)

1. Ghiush al-Din Barbak Shah (1487-1488)

For the murder and the confusion that followed, the Ilyas Shahi Barbak Habshi policy way held responsible. The extent to which this blind policy had resulted in the destruction of the old nobility is shown by the utter lack of opposition which marked the subsequent assumption of sovereignty by the slave body-guard. Shamsuddin Ahmed Shah's murderer was quickly displaced. As Blochman observed,¹⁴ "from protectors of the dynasty, the Abyssinians became masters of the kingdom". With the support of the Paiks and his own compatriots, Shazāda seated himself on the throne and assuming the title Barbak Shah, received the salute of the assembled men. He gathered round him a large number of low-born men who were raised to high offices, and set about systematically to remove the force, Malik Andil who was a power to reckon with, and so when he returned to the capital the usurper dared not lay hands on him. Malik was persuaded to promise, on a solemn oath, never to injure Barbak so long as he was on throne. Anxious, however, to avenge his master, Andil, in collusion with the Paiks, secretly made his way into the palace at night, but finding his enemy sleeping on the throne, remembered his oath and hesitated to strike. Providence soon come to his help, for in his drunken stupor the eunuch rolled down to the ground. Malik Andil struck with his sword, but in the scuffle that followed he was thrown to the ground and his accomplices, waiting outside, had to be called in. Pretending

¹¹ *Encyclopedia of Islam*, Vol.111, Netherlands: E.J. Brill, 1979, p.57.

¹² Abdul Karim, *Social History of the Muslims in Bengal*, Dacca: Jatiya Grantha Prakashan, 1959, p. 56.

¹³ Richard M. Eaton, *The rise of Islam and the Bengal frontier*, 1204 -1760, Delhi: Oxford University Press, 1997, p.32.

¹⁴ Pankhurst, *An Introduction to the economic history of the Ethiopia*, London: Oxford university press, 1961, p.47.

to be dead Barbak was left alone, and he hid himself in a dark chamber. He was eventually betrayed by his own attendants and second attempt by Malik Andil finally succeeded in killing him.¹⁵ How long the eunuch's sovereignty lasted, it is difficult to say, for no epigraphic or numismatic record of his reign has come to light. Salim, probably on the authority of the 16 century history quoted by Buchanan, assigns to him a reign of six months.

Saif al-Din Firuz Shah (1488-1490)

As a mark of his loyalty to the king, Andil offered the throne to his master's infant son, but Faht's widow declined it in favour of Andil himself, the avenger of her husband. The Abyssinian general was thus ultimately prevailed upon by the nobles headed by Wazir Khan Jahan, to ascend the throne with the title Saifuddin Firuz. In the dark annals of Abyssinian predominance in Bengal, Firuz's reign alones provides a welcome relief. He is credited with having ruled justifiably and efficiently. His reputation as a soldier inspired respect and awe; and his attachment to the Ilyās Shahi house made the people forget his race.¹⁶ His kindness and benevolence evoked warm praises from the historians and the Riyaz describes how he confounded his treasury officials by the largeness of his gifts to the poor. His coins range from 1486 to 1489. His three years rule, according to the 'more reliable account' cited by the Riyaz-us-Salatin, was terminated by his death at the hands of the Paiks, who appeared to have become king-makers. One Firuz's inscriptions found at Sherpur, Nothern Mymensingh, provides evidence of the continued incursion of that part of Bengal within the kingdom of Gaur.¹⁷ The reign of this Abyssinian monarch is commemorated by the Firuzi Minar, one of the few monuments round the Gaur citadel that are still in a tolerable state of preservation. Some of his coins bear the mint name of Fathabād. Firuz Shah ascended to power with full support of the local nobility, both Ashrafs and Habshis. Firsthand accounts by Arab historians bestow the reputation upon Firuz Shah as the greatest of all four Habshi sultans of Bengal. He was a bold and charismatic leader, while showing secular restraint and generosity towards Muslims and non-Muslims alike. He awarded living wages to artists and architects and further bolstered his support by distributing rupees among the poor and oppressed Namasudra (low caste) and Dalit populace. As a testament of his considerable patronage of the artistic and cultural sectors, many mosques, towers and inscriptions survive today.¹⁸ The Firuz Minar, located in Gaur, West Bengal endures as one most revered monument in all of Bengal. It is a lasting imprint of the short-lived Ethiopian presence in Bengal.

Qutb al-Din Mahmud Shah (1490-1491)

The son of Firuz Shah, Mahmud Shah assumed power in 1490 A.D. along with his top advisor, another Abyssinian named Habash Khan. But, mystery surrounds the antecedents of the next king. The Tabaqat, whom Salim obviously copies, calls him a son of Firuz, while Arif Qandhari quoted by Firishta, ascribed his percentage to the Fath Shah. In his coins and inscriptions however, no reference is made to his father, a very unusual practice if he were really a 'king' son of a king.¹⁹ Being still very young, Mahmud was allowed the only authority, the government being conducted by the regent, Habsh Khan, an Abyssinian whom, according to Arif Qandhari, Firuz had appointed to be the boy's tutor. Habsh Khan eventually fell a victim to the jealousy of another of his race, called Sidi Badr, nicknamed

¹⁵ S.C. Misra, *Muslim communities in Gujrat*, New York, 1964, p.76.

¹⁶ C. Stewart, *History of Bengal*, Calcutta: Bangabassi office, 1813, p.119.

¹⁷ V. A. Smith, *The Oxford history of India*, 2nd edition, Oxford: The Clarendon press, 1961, p.231

¹⁸ Jadunath Sarkar (ed.), *The History of Bengal*, Vol.11, Dhaka: University of Dhaka, 2006, p.132.

¹⁹ Sukhamoy Mukhapaddy, *Banglar Itihash-1204-1576 (History of Bengal -1204- 1576)*, Dhaka: Khan Brothers and Comp., 2000, p.75.

Diwāna (mad), who then assumed the regency and planned to usurp the throne. Following the method of his former compatriots he conspired with the fickle-minded palace-guards and one night secretly dispatched the boy-king. The morning found him seated on the throne, and a fait accompli was thus presented to the courtiers who, in any case, were either not inclined to oppose, or found it expedient to acquiesce in his accession. None of Mahmud's coins, so far unearthed, bears any date. Epigraphic records dated in 1490 and 1491, however, confirm the statement of the *Tabaqat* that he reigned for one year. Of the three inscriptions of his reign so far discovered the one at Kalna, Burdwan, is important as showing the continuity of expansion in the direction at the expense, the most obviously, of Orissa. Not long after their emergence into leadership was a successful coup staged by a rival faction under the auspices of an Abyssinian named Sidi Badr Diwana.²⁰ The rebel leader executed Mahmud Shah and his entire cabinet and captured the sultanate under the title Shams al-Din Muzaffar Shah.

Shams al-Din Muzaffar Shah (1491-1493)

The assassin styled himself Shamsuddin Muzaffar and proclaimed his accession to the throne by the issue of a gold coin early next year. But his rule was a fitting climax to infamous Abyssinian epoch in Bengal, for his was a perfect reign of terror. Anxious to root out all oppositions, he was not satisfied with merely purging the government, but commenced a ruthless destruction of the noble and learned men of the capital.²¹ His sword fell equally heavily on the Hindu nobility and princes suspected of opposition to his sovereignty. His tyranny soon reached the people, for in his greed for money he made extortionate demands of revenue. In his avarice he even reduced the soldiers' pay and thus antagonised the instrument of his own power. He was still able to continue on the throne for three years due to the prudence of his wazir, Sayyid Hussain, in appointing whom Muzaffar had made a singularly happy choice.²² His tyranny however became insupportable at last and drove the people to armed resistance. Foreseeing the fate reserved for Muzaffar, the shrewd wazir secretly allied himself with the insurgents and at an opportune moment putting himself at their head, put a siege of the citadel in which, with a few thousand mercenaries, the tyrant had shut himself up. The siege dragged on for four months in course of which twenty thousand men were said to have been killed on two sides. Firishta's statement that Muzaffar lost his life in a desperate sally from the citadel is not supported by the *Tabaqat*, according to which, he was secretly assassinated, with the help of the *Paiks*, by Sayyid Hussain. This finds partial support in the Portuguese account. The latest recorded date of Muzaffar's reign is 31st December, 1492, while the earliest inscription of his successor is dated 12th August, 1494. The period of three years and five months allowed to him by the *Tabaqat* would, however, extend his reign up to the end of 1493. In spite of its rather violent beginnings, for the next three years Muzaffar Shah led an extension of the cultural patronage of Firuz Shah, developing a sophisticated currency coinage system and the construction of a famous mosque built in 1491. During the last few months of his reign the anti-Abyssinian sentiment of the upper caste Hindus and the Ashrafs was reaching a climax. Finally, the last Habshi Sultan was killed under the orchestration of the son of Ashraf al Husaini, Hussain Shah with the assistance of the Hindu Paiks or military guards.²³ He subsequently cleansed the administration of the

²⁰ Ghulam Hossain Salim, *Riyaz-us-Salatin: A History of Bengal*, Tr. Abdus Salam, Delhi, Idarah-i-Adabiyat-i-Delhi, 1975, p.179.

²¹ Khwajah Nizamuddin Ahmad, *Tabakat-i-Akbari*, Calcutta: Asiatic Society, 1973, p. 65.

²² V. A. Smith, *The Oxford history of India*, op.cit., p. 39.

²³ Abul Qasim Ferista, *Tarik-i-Firista*, Tr. John Briggs, *History of the Rise of the Mohamedan Power in India*, vol.11, New Delhi: Atlantic Publishers & Distributors, 1989, p. 39.

Abyssinian nobles, expelling them to the Deccan. Thus, the Habshi rule of Bengal ended as it began.

An Overview

The period of Habshi rule is a largely untold and neglected period of Bengal's history, stemming from the dishonesty and bias of the predominant historical literature, written mostly by the upper caste Hindu, and Ashraf Muslim authors. One can only condemn these misguided and unethical scholars that have championed their history at the expense of others.²⁴ Therefore, the surviving Hindu eyewitness reports written in Bengali are fanatically skewed and riddled with inconsistencies while the external accounts written by Chinese, Portuguese and Arab travelers into the region are widely accepted by the historical community as being more reliable. So, there are lacks of specific and reliable historical sources on them, it is hard to evaluate the Habshi rule in Bengal. However an attempt can be made to look into the rule and the rulers of Habshis in Bengal.²⁵ The Habshi rule in Bengal was not satisfactory at all. The rule of the Habshis (Abyssinians) in Bengal lasted nearly six years (1487 to 1493 A.D.), during which four rulers ruled Bengal. On his accession Shahzada assumed the title of Sultan Barbak Shah. His rule was characterized by a policy of systematic elimination of opponents. This policy, however, could not save him and Malik Andil ultimately murdered him. Barbak Shah's rule lasted only six months. Malik Andil, with the consent of the nobles, ascended the throne with the title of Saifuddin Abul Muzaffar Firuz Shah in 1487.²⁶ The Persian chroniclers praised him highly for his benevolence and kindness to the poor and needy. He valued justice and liberality and made noble efforts to secure peace and comfort for his subjects. He was also a patron of art and architecture. From the evidence of his coins and inscriptions it appears that he ruled over a wide tract of Bengal. He either died a natural death or was secretly murdered after a reign of three years in 1490. Nasiruddin Mahmud Shah II succeeded Saifuddin Firuz Shah. During his reign, Habash Khan grew in influence and this excited the jealousy of another Abyssinian slave named Sidi Badr Diwana, who ultimately killed Habash Khan and Mahmud Shah with the help of the paiks. Mahmud Shah's reign lasted a few months. After the murder of Mahmud Shah II, Sidi Badr ascended the throne in 1490 and assumed the title of Shamsuddin Abu Nasr Muzaffar Shah. His reign was, for all practical purposes, a reign of terror. In order to get rid of his opponents, he slew many nobles and scholars. He exploited his subjects and collected revenue at extortionate rates, disbanded the greater part of his standing army and reduced the pay of his soldiers.²⁷ Though a brute, Muzaffar Shah was not altogether a heartless tyrant. During his reign he devoted himself to the promotion of education and culture. He was a patron of saints and built a mosque at Gaur. His reign lasted nearly three years (1490 to 1493). His inscriptions and coins indicate that his kingdom included the whole of north Bengal and some portions of Bihar. The tyrannical rule of Muzaffar Shah alienated the people; Sayid Husain an Arab by descent and the chief minister of Muzaffar Shah organised a revolt and killed the sultan.²⁸ With the murder of Muzaffar Shah, Habshi rule in Bengal came to an end. So, between 1487 and 1493, the few years of Abyssinian Habshi rule, there was no mentionable cultural progress in the country, no mentionable architectural establishments and no mentionable works for the poor and destitute of the Bengal.

²⁴ Abdul Karim, *Social History of the Muslims in Bengal*, op.cit., p.61.

²⁵ Imtiaz Ahmad ed., *Caste and Social Stratification Among Muslims in India*, op.cit., p.19.

²⁶ Pankhurst, *An Introduction to the economic history of the Ethiopia*, op.cit., p.

²⁷ Shanti S. Ali, *The African Dispersal in the Deccan*, op.cit., p.45.

²⁸ V. A. Smith, *The Oxford History of India*, p.321.

Conclusion

The Habshi rule, in general, was far from congenial for the welfare of Bengal, for it had fallen into a state of anarchy and disorder as a result of constant political murders, frequent changes of rulers and misrule and tyranny. In other words, murder, coup, conspiracy against the Sultans were at the centre of their minds and activities. Though there were found some architectural establishments but these are not mentionable in terms of popular or famous rulers. The people were the subject's of achieving ill motives and were suppressed the excessive tax. But the main reason behind their unwillingness in ruling smoothly was that almost all the people in the central administration were mostly busy with conspiracy so that they could ascend the throne. Thus, the Habshi rule ended by the murder of Muzaffar Shah and again the Husain Shahis restored the peace and prosperity to the country by establishing a stable government. However this chapter of history should never be forgotten, as it is an important part of medieval Bengal history.

CHITTAGONG UPRISING 1930: BRITISH OPPRESSIONS ON CHITTAGONG PUBLIC

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Abstract: This paper presents a brief account of British oppressions on Chittagong public following the Chittagong uprising in 1930. The people of Chittagong both Hindus and Muslims were sympathetic to the revolutionaries and helped them by giving subscriptions, shelter and support in many ways. Because of that the British authority adopted various repressive measures through numerous arrests and detentions of the youths. The youths were ordered to carry identity card and to restrict their movements. Punishments were given to many inhabitants of Chittagong for giving shelter to the revolutionaries and also imposed punitive tax resulting in physical, mental and economic sufferings of them.

The Chittagong Uprising (1930) under the leadership of Surya Sen was a landmark in the history of India's national struggle for freedom.¹ The uprising and the series of revolutionary activities upto 1934 shocked the British imperialists and they launched a brutal round of repression not only against the revolutionaries but also against the people of Chittagong. The general attitude of the Chitagon people, both the Hindus and to a certain extent the Muslim was sympathetic toward the revolutionaries and they helped the revolutionaries giving subscriptions for the defense of the accused in the Armoury raid case, providing information of police military movement, shelter and support. For this cause, local administration of Chittagong adopted various repressive measures to suppress the people of Chittagong. In some books and articles, though the action of the revolutionaries has been discussed in detail, nothing has been mentioned regarding the oppressive measures on Chittagong people. In this article, I have tried to discuss in details the oppressions by the local administration and Military force resulting in the sufferings of the Chittagong people, based on contemporary newspaper and unpublished confidential government records.

The local administration of Chittagong became very much concerned about the sudden Armed uprising. The authorities immediately took various steps for the protection and security of the district town. A large number of Gurkha soldiers were brought to tackle this situation. Strong arrangements for armed patrolling on the roads of the city were made.^{1a} Curfew was imposed in Chittagong Municipal areas from 9 p. m to 6 a. m on April 20.² Numerous houses were searched both in the town and villages and a large number of young men, mostly students were arrested, arrest and house searches also continued.³ At

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the same time, the district police department made attempt to build up a better system of collecting secret information to arrest the rebels.⁴ Though there was a massive increase of armed forces and security arrangements, the authorities failed to collect any information about the rebels. A senior Army official reported the situation in Chittagong to the Inspector General of Police on 6 May 1930: "It is getting increasingly difficult to know what action to take or in which direction to try any operations, in the absence of any information as to the whereabouts of any band of rebels."⁵

On the same date J. C. Farmer, D. I. G. reported about the general public feeling regarding the revolutionaries thus:

Great apathy on the part of the public in giving out information, the Hindus on account of actual sympathy with the rebels, the Muslims on account of Government being no longer a real factor, so they are not willing to incur the displeasure of the Hindus by taking an active part in hunting out the rebels.⁶

Surja Sen received the information of the coming of Craig, the then Chief of the Bengal Police, to Chittagong towards the end of November 1930 in order to rearrange the District police to capture the remaining absconders of the Armoury raid case. Surya Sen made plans to kill him and sent two young Revolutionaries, Ramkrishna Biswas and Kalipada Chakraborty, to carry on the plan. On 1st December 1930, the two Revolutionists shot and killed Tarini Mukherjee, Railway Police Inspector who was accompanying Craig at Chandpur Railway Station by mistake. Ramkrishna Biswas and Kalipada Chakraborty were arrested.^{6a} After a short trial by the special Tribunal at Alipur, Ramkrishna Biswas was sentenced to death and Kalipada Chakraborty was sentenced to transportation for life.^{6b} Ramkrishna Biswas was hanged in early August 1931 in Alipur jail.^{6c} In regard to the execution of Ramkrishna Biswas, the local nationalist daily *Panchajanya* wrote a series of articles eulogising the deeds and career of Ramkrishna and holding him up as a model to the youth of Chittagong and deploring his death.⁷

The assassination of police official at Chandpur by the members of the Chittagong revolutionary group seriously perturbed the authorities in Chittagong. From the beginning of 1931 the authorities took strong security measures and made numerous arrests and launched a reign of terror throughout the district of Chittagong.⁸ In early January the district administration requested for additional police force to the Bengal Government for quartering at Patiya, Boalkhali, Anwara, Raozan and Hathazari police stations to root out the revolutionary activities,⁹ and accordingly additional police force were deployed in May.¹⁰ The local daily *Panchajanya* reported in February that villages Saroatali, Dhorala, Bidagram and Sripur within the Boalkhali police station had been surrounded by about 400 Military police.¹¹ In the same month more than 700 armed police from Jalpaiguri, Bogra, Faridpur and other places had been brought to Chittagong for conducting a general search for the absconders.¹² Three permanent police camps were set up at Sripur, Saroatali and Fakirnir Dighi(Gomdandi) under Boalkhali Police Station in view of the authority's impression regarding some of the absconders of the Armoury raid case who were supposed to be hiding in the villages of that area.¹³ The Chittagong correspondent of the *Amrita Bazar Patrika* reported that persons of all sorts and ages were searched by the military officers posted at every street corner.¹⁴ In spite of these heavy repressive measures, arrests and complete military control in Chittagong, the activities of revolutionaries did not stop and the authorities failed to arrest leaders like Surya Sen, Nirmal Sen and Tarakeswar Dastidar and others. The District Magistrate reported thus:

Not only have they been able to avoid arrest, but reports from various sources show that they are sufficiently secure to be able to carry on recruitment and attract to the terrorist party persons who have hitherto

abstained from violence. This together with the fact that subscriptions for defence of the accused in the Armoury Raid case are openly being collected shows that many of the inhabitants are in active sympathy with the movements.¹⁵

The local authorities called for additional police as stated above for the villages to round up the revolutionaries hiding there and accordingly early in May 1931 additional police force were posted in fifty two villages within Patiya, Boalkhali, Anwara, Raozan and Hathazari Police Stations,¹⁶ disregarding the repeated public protests.¹⁷ Soon after the discovery of jail destruction conspiracy strong arrangements of armed police patrolling were made in town as well in villages.¹⁸ The authorities gave more attention to the mofussil areas as all the plan of revolutionary actions, they believed, were drawn up by the revolutionary leaders hiding there. A confidential report noted: "The key to the situation is not in the town, but in the interior which is the main centre of revolutionary organisation."¹⁹

For this reason seven camps of additional police were stationed at Paraikora, Barama, Patiya, Boalkhali, Dhorala, Raozan and Fateabad to collect information about the rebels and to root out the revolutionary organisation from these areas.²⁰ On 18 May 1931, the District Magistrate distributed a printed public notice throughout the district advising the people to help the Government in arresting the revolutionaries. A part of the notice reads as follows:

The public of Chittagong are therefore advised in their own interests to bring to the notice of the authorities any activities of a terrorist nature or any other movement which to them may appear suspicious and to give immediate information of the presence or whereabouts, should they become known, of the absconders of the Armoury Raid.²¹

The District Magistrate and Superintendent of police toured rural areas like Dhorala, Noapara, Chowdhury hat and Patiya where the District Magistrate warned the inhabitants not to give shelter to the absconders. The District Magistrate said, "If we have reason to believe that absconders are being harboured inside these villages, he will have no hesitation in asking for more additional police."

He added that they could relieve themselves of the responsibility of paying the cost of the additional police by surrendering the absconders.²² The nationalist daily *Panchajanya* published a series of articles criticising the speeches of the District Magistrate.²³ The above precautionary measures and propaganda works of the authorities, however, could not stop the revolutionary activities and the people from giving them shelter. On 23 May the Superintendent of police reported, "reports that have been received from the Dhorala and Rouzan camps of new youth associations who are moving about the areas on cycles, assemble at certain places and take physical exercises and generally keep the police movements under watch."²⁴

In fact, at this time the revolutionary organisation seemed to have become strong in Chittagong. According to the Government records, "the party was then in a stronger position than in 1930. This show to what extent the help and shelter given by its friends and supporters had enabled them to proceed."²⁵

The revolutionaries carried out their activities in spite of various precautionary measures adopted by the military and police. Some young activists were arrested following the discovery of dynamites and explosive materials in the town.²⁶ After these discovery security was tightened more. The bail of the six under trials in the case were cancelled.²⁷ The District Magistrate declared new order restricting the movements of the Hindu youths aged between 12 and 26 within the Municipality of Chittagong, the jetties and Pahartali between

7 pm and 5 am.²⁸ Vigorous house searches were conducted and arrests were made by the combined force of Gurkhas and Armed Police in town and particularly in villages such as Sripur, Jaistapura, Dhorala, Kanungopara, and created a panicky situation throughout the district of Chittagong.²⁹ The *Panchajanya* remarked, "as a result of their (police and military) repressive measures, the harmless and the innocent people of the country have suffered much. The revolutionary activities have not been checked, but are going on as vigorously as before."³⁰

At the middle of June 1931 the Commissioner of Chittagong wrote to the Chief Secretary, Government of Bengal that it was only in Chittagong that the terrorists had come out openly. They had obtained help with information, money and shelter from the local public sympathisers. This section of the population was not helping the police against the revolutionists.³¹ The S. P. of Chittagong reported that "even from one of his best investigating officers he has had no information at all affecting the revolutionaries."³²

Thus we see that in spite of various repressive measures, the secret activities of the revolutionaries were going on and the authorities failed to collect information about the main band of the rebels and their secret shelters because of active sympathy of the village people towards the revolutionaries. In August, J. R. Johnson, the Superintendent of Police admitted that "the terrorist party is safe in the harbourange" and pointed out that, "if this situation is not met by the arming of the police with special powers the only other solution seems to be that although we shall have to try to prevent any further outrage if it occurs, the desirability for Martial Law will then possibly become a necessity."³³ But before taking these steps, on 30 August Khan Bahadur Assanullah, a prominent police officer, who was a target of the revolutionaries for his strong repressive action against the revolutionaries was shot dead at Chittagong town by Haripada Bhattacharjee, a young member of the revolutionary group.³⁴ Haripada Bhattacharjee was arrested on the spot and later on sentenced to transportation for life.³⁵

After the assassination of Khan Bahadur Assanullah terrible repression started both in the town and rural areas of the district. In early September 1931, Military force completely destroyed and set on fire the houses of Ramkrishna Biswas who killed Tarini Mukherjee, Haripada Bhattacharjee and Tarakeswar Dastidar (a prominent young revolutionary of Chittagong group).³⁶ Many inhabitants both male and female of villages Saroatali, Kanungopara, Dhorala, and Sripur were brutally assaulted by the Military. Brutal repression continued in the following weeks which created a panicky situation in the villages.³⁷ On 30 October; the correspondent of the *Liberty* reported the Chittagong situation thus:

Chittagong will have no peace. For more than a year and a half insults, humiliation and miseries have been heaped upon Chittagong. The curfew order, punitive police, ban on meeting and processions, continuous house searches and arrests, terror-these constitute the normal life of Chittagong. It is yet too early to prophesy when this lawlessness will come to an end.³⁸

On November 30, the Bengal emergency power ordinance IX of 1931 was promulgated and the emergency provisions of the ordinance were immediately enforced in Chittagong district.³⁹ The local nationalist daily *Panchajanya* criticising the Government repressive ordinances wrote on 12 December: "Instead of repairing the damages done to and redressing the wrongs committed on the innocent citizens at Chittagong, Hijli and Dacca, the Government is trying to crush the Bengali nation by promulgating one ordinance after another."⁴⁰

In December 1931, the District authorities promulgated a series of ordinances, which were more or less equivalent to Martial law, in Chittagong warning the public to obey the order of military and police without any question and restricting public movement at night and prohibiting the young men to use bicycles.⁴¹ At the same time as reported by the District Magistrate of Chittagong:

The troops and police occupied the area in which according to information, the absconders were obtaining shelter. The areas extended 700 square miles in Patiya, Boalkhali, Hathazari, Raozan, part of Rangunia, Kotwali, Panchalais and Double mooring Thanas. It was divided into six sub-areas each under the command of the senior military officers as sub-area commanders.⁴²

More than fourteen arrests were made under the Bengal ordinance within one month.⁴³ Thus it appears that without taking into account the sufferings of the general public, the authorities took numerous oppressive measures in the name of arresting the revolutionaries. From the beginning of 1932 the authorities applied new tactics and military officers with the help of the presidents and members of the Union Board started propaganda in villages like Patiya, Saroatali, Sripur, Fateabad and others areas asking the public to help the military in finding out the absconders.⁴⁴ These propaganda works, house to house searches, arrests and tortures continued in the following months.⁴⁵ Even many females were assaulted by the military force during the house searches. The *Amrita Bazar Patrika* reported that a group of Military force assaulted one village woman Charu Bala Sen of Noapara.⁴⁶ However, despite these propaganda and oppressions, the authorities failed to capture the leaders like Surjya Sen, Nirmal Sen and Tarakeswar Dastidar till then.

Meanwhile, on 1st March 1932, the judgment on the first case of the Armoury raid was delivered. Out of the total 32 accused 12 were sentenced to transportation for life, two were sentenced to 2 and 3 years respectively and the remaining were acquitted.⁴⁷ As Surya Sen, Tarakeswar Dastidar and few others could not be arrested since then the case against them in regard to the Armoury raid was not started. The Judgment of the first case made the hiding revolutionaries more determined. Surya Sen now decided to send female activists into actions.⁴⁸ Accordingly a secret meeting was called on the night of 13 June 1932 at a village house in Dhalghat. The meeting was attended by Surya Sen, Nirmal Sen and Pritilata Waddedar, a female revolutionary, Apurba Sen (Bhola). Suddenly a combined force of Gurkhas and police led by Captain Cameron attacked the house. There was a skirmish between the combined force and the revolutionaries in which Captain Cameron was shot dead. Nirmal Sen, for whose arrest a reward of Rs. 5,000 was announced and Apurba Sen were dead.⁴⁹ While Surya Sen and Pritilata Weddeder successfully escaped.⁵⁰ After this an intolerable situation was created by the Military and police. Dhalghat and its neighbouring villages were rigorously searched and they ordered the villagers to keep light burning in every house throughout the night and to carry a lamp while going out at night.⁵¹ Collective fine of Rs. 5,000 were imposed on the inhabitants of Dhalghat as penalty for their apathy in giving information to the local authorities about the absconders.⁵² Reward was declared for the arrest of Pritilata Waddeder as the authorities got definite information that she was present at the time of Dhalghat incident and escaped.⁵³

About this time some loyalist citizens came out to help the authorities against the revolutionaries. Rai Bahadur Kamini Kumar Das MLC, Rai Bahadur Satish Chandra Sen, Government pleader, and others with the blessings of local officials, formed the Chittagong Terrorists Suppression Committee with the aim of cooperating with the authorities in stamping out revolutionary forces termed by them as terrorism from Chittagong. The committee called upon the people to carry on propaganda against the members of the

revolutionary organisation.⁵⁴ Their propaganda could not attract the people and nobody came out to give information about the revolutionaries. People's sympathy and support for the revolutionaries and their resentment against the Government's stern oppressive measures were revealed in various ways. The correspondent of the *Amrita Bazar Patrika* reported in July that the cross on the graves of Sergeant Mazor Farral and Walker, at Chittagong town, who were killed during the Armoury raid, were removed and instead words and expressions like "rascal", "fool" and "long live revolution were written on the graves".⁵⁵

During July-August, numerous youths, mostly students, were arrested as suspects in connection with revolutionary activities under the emergency ordinance.⁵⁶ But the wholesale arrests, repressive measures and propaganda of the loyalists could not check the revolutionary activities. It may be noted here that the plan of attacking the Pahartali European club was taken in early May 1930 but it could not be executed then. Now Surya Sen planned to attack this club. Pritilata Waddeder who had dedicated her life for revolutionary activities and had been vehemently arguing to lead an action was selected the leader of the group consisting of Panna Lal Sen, Santi Chakraborty, Prafulla Das, Bireswar Roy, Mahendra Chowdhury, Sushil Dey and Kalikinkar De.⁵⁷ Accordingly Pahartali European club was attacked on the night of 24 September 1932 killing one and seriously injuring many official and non-official Europeans. After the action seven members of the group could escape but Pritilata Waddeder, the leader of the group, who was injured by revolver shot, committed suicide by taking potassium cyanide to evade arrest.⁵⁸ This happening seriously moved the European community in Chittagong. A. S. Hands, the District Magistrate of Chittagong wrote to the Chief Secretary, Government of Bengal, on the occurrence of Pahartali Club that the excellent morale of the European and Anglo-Indian non-officials in the face of an attack which really has produced a more serious situation than the original Armoury Raid (because of its clear proof of a wholesale murder campaign against Europeans and Anglo-Indians), has been invaluable to the local officers in dealing with the situation.⁵⁹

He pointed out that "the only way of dealing with another outrage on the non-official European and Anglo-Indian community is the immediate declaration of martial law".

He suggested:

The appointment of a summary court presided over by the District Magistrate, with no regard to the criminal procedure code, or the Indian Evidence Act and with powers to impose any sentence authorised by the ordinary law, including death, without confirmation by a higher court, and without appeal and including whipping up to the amount authorised by the ordinary law.⁶⁰

After the attack of Pahartali Club Military and Police oppression increased further. Military camps were increased and these were set up in the interior of the district villages. On suspicion of having connection with the incident more than 30 innocent students and youths were arrested from various parts of Chittagong and were brutally tortured in Military camps and I. B. office but failed to collect any information regarding the revolutionaries who took part in attacking the club. The Government could not start any case for want of evidence.⁶¹ Having failed to collect any information regarding the revolutionary youths and arrest the remaining Major leaders including Surya Sen the authorities came out with new weapons of repressions, ordered Hindu middle class youths of Chittagong both in town and villages to remain at home from sunset to sunrise⁶² and ordered many citizens including Hirendra Lal Chowdhury, Assistant Editor of the daily *Panchajanya* of Chittagong, not to

leave the precincts of their home for a particular period.⁶³ More drastic step was the order of the Bengal Government on 27 September asking the inhabitants of Chittagong to provide information about the rebels who attacked Pahartali European club as the Government believed that without the connivance of the local inhabitants it would not be possible for revolutionaries to assemble and carry out the occurrence and many inhabitants would be able to throw light on the occurrence and the attacking rebels.⁶⁴ It was warned that if the inhabitants failed to provide information about these rebels within 15 October, 1932, Government would impose a heavy collective fine upon the section of the community. Nobody in the villages and town came forward to give any information that could lead to the arrest of the revolutionaries who attacked the club. As punishment, the Government imposed a collective fine of Rs. 80,000.00 upon the inhabitants of Chittagong town and seven villages such as Patiya, Anowara, Kanungopara, Saroatali, Sukpura, Kattali and Gomdandi.⁶⁵

The imposition of collective fines created resentment among the people both Hindus and Muslims of Chittagong. Protests were made by the Chittagong Municipal Commissioners and the Indian Merchants Association of Chittagong branch.⁶⁶ On 23 November 1932, the Commissioners of Chittagong Municipality assembled at a meeting and demanded to revoke the collective fines as this step would affect the Municipal income and create great hardship and annoyance to the rate-payers and decided to send a deputation to the Governor of Bengal for this purpose.⁶⁷ Accordingly, a deputation consisting of leading citizens like S. L. Khastagir, Jegendra Guha, Vice-Chairman Chittagong Municipality, Prasanna Sen, Rai Bahadur Kamini Kumar Das, MLC, Hazi Bodi Ahmed Chowdhury, Rai Bahadur Nagendra Nath Roy Chowdhury, Chandra Sekhar Sen, Advocate High Court, Nurul Absar Chowdhury met the Governor on 17 December 1932 and submitted a memorandum demanding the revocation of collective fine upon the Chittagong public.⁶⁸ But refusing their demand, the Governor said, "without help supplied in these various ways, the absconders would not have enjoyed comparative immunity for so long".

He added, "the province as a whole, the entirely law-abiding part along with the rest was paying for that, paying for the activities of the revolutionaries. It was not wholly inappropriate therefore that Chittagong should bear some extra burden in relief of the province as a whole".⁶⁹

We see that pro-government persons and few prominent members of the Chittagong Terrorists Suppression Committee like S. L. Khastagir, Rai Bahadur Kamini Kumar Das MLC and Jogendra Guha were included in the deputation on the list of persons who made propagandas against the revolutionary terrorism in Chittagong.⁷⁰ But they failed to change the attitude of the Government regarding the punitive tax.

Meanwhile early in September 1932, the Bengal Legislative Council passed the Bengal Criminal Law Amendment Act 1932 giving powers of death sentence for attempt at murder and the Bengal Suppression of Terrorist Outrages Act 1932 which empowered to seize buildings, to order citizens on pain of punishment to assist them in the suppression of terrorism and to impose collective fines on villagers.⁷¹ Using these powers the local authorities issued a series of restriction notices upon the youths throughout the last quarter of 1932. But the authorities failed to stop the revolutionaries and arrest the Principal leaders as they worked very carefully taking shelter in less suspected areas.⁷² According to the District Magistrate, every effort is being made to cause as little inconvenience to the general public as the responsibility rests with the terrorist organisation in this district which has already been the cause of a number of murders and has announced its intention of carrying on a still more extensive murder campaign.⁷³

From the beginning of 1933, the local administration desperately tried to root out the revolutionary activities from the district of Chittagong and to capture the whole band of absconders including Surya Sen. Rigorous searches were conducted in villages after villages and a large number of youths were arrested on suspicion within the first quarter of 1933 under the Bengal Criminal Law Amendment Act and the Bengal Suppression of Terrorist Outrage Act.⁷⁴ At this period more important conduct of the authorities was the arrest of Surya Sen on 16 February 1933 from Gairala under Patiya Police Station.⁷⁵

The arrest of Surya Sen weakened the revolutionary party in Chittagong. But plan of actions were going on under the leadership of Tarakeswar Dastidar who was the lieutenant of Surya Sen all the time after the killing of Nirmal Sen in June 1932. Tarakeswar Dastidar made a secret plan to rescue Surya Sen from the Jail. Accordingly a young activist, Sailesh Ray was to communicate the plan to Surya Sen in Jail. In March while Sailesh Ray was handing over a message through a Jail Warder to Surya Sen, he was arrested by a D. I. B. Inspector at the bank of Lal Dighi near the Central Jail and consequently the secret plan was discovered.⁷⁶ Police collected information of arms from Sailesh Ray by torture and seized a loaded revolver including some bombs from a godown in Boxir Hat. A case known as Boxirhat Bomb Case was started against Sailesh Ray and Sasanka Chowdhury. They were sentenced to seven years and five years imprisonment respectively.⁷⁷

Meanwhile the first supplementary case of the Armoury raid was began on 3 January 1933 with three accused Hemendu Dastidar, Ambika Chakraborty and Saroj Guha. The Judgment of the case was delivered in early February. Ambika Chakraborty was sentenced to death, Saroj Guha was sentenced to transportation for life and Hemendu Dastidar, was acquitted.⁷⁸ Ambika Chakraborty and Saroj Guha appealed to the High Court which changed the death sentence of the former giving both of them transportation for life.⁷⁹

After the arrest of Surya Sen the remaining members of the revolutionary party needed frequently to change their shelters to avoid arrests.⁸⁰ But the Police and Military were all along chasing them. In the middle of May 1933, the small group consisting of Tarakeswar Dastidar, Kalpana Dutta, Monoranjan Das, Sudhindra Das took shelter in a house of Purna Talukdar in Gohira, a village near the sea coast. On 19 May suddenly they were surrounded by Military force. There was a skirmish between the revolutionaries and the Government forces resulting in the death of Monoranjan Das, and Purna Talukdar. Nishi Talukdar (brother of Purna Talukdar) who was seriously injured, Kalpana Dutta and Sudhindra Das were arrested.⁸¹ After this incident the revolutionary movement in Chittagong considerably slowed down. Nevertheless, the authorities did not stop their repressive measures. A large number of youths were arrested in the next months on various allegations and were sentenced to various terms.⁸² The District Magistrate issued notices under the suppression of Terrorist Outrages Act upon the Hindu middle class youths between the ages 12 to 25 residing at Kotwali, Doublemooring, Patiya, Boalkhali, Anwara, Hathazari, Raozan and Panchlaish to obtain identity cards from the authorities. The authority tried to justify this order by arguing that it was necessary to check the movements of persons who were suspected of supporting the terrorists. The youths were ordered to carry the identity cards at all time and produce for examination by the Military, any gazetted Civil Officer, or any member of the village Watch and Ward committee.⁸³ The order to carry identity cards had been introduced to curb the movement of the revolutionary youths and to prevent them from organising themselves further. In spite of this, however, some brave youths tried to organise themselves. But the Police was highly alert. On 20 September Fanindra Bose, Himangshu Dutta, Anukul Chakraborty, Debendra De, Amalendu Dastidar, Dharendra Gupta of villages Sripur and Kharandwip were arrested for not possessing identity cards.⁸⁴ Some

youths who were not in the suspected list and holding white cards tried to communicate with the hiding revolutionary youths. The Chittagong correspondent of the *Amrita Bazar Patrika* reported that the authorities changed the cards of Rabindra Dutta and Nanigopal Dutta of Kharandwip from white to blue for their suspicious movement.⁸⁵ About this time a new development was seen in the secret activities. Some Muslim middle class youngmen, like Nabidul Haq, Mir Ahmed and others joined the secret revolutionary organisation. They engaged themselves to arrange shelter and carrying revolutionary books, manuscripts, etc. for the absconding revolutionaries. As they could friendly move, they took the task of communication among the revolutionaries. However, their activities could not remain secret to the local authorities. Nabidul Haq and Mir Ahmed were arrested in the months of October and November 1933 respectively.⁸⁶ Thus it seems that though all the prominent leaders of the Chittagong revolutionary group were arrested, the revolutionary works could not be totally stopped. According to the District Magistrate, "certain youths even now are actively engaged in the terrorist movement as shown by their possessing objectionable books and procuring absconders shelters."⁸⁷

A Government confidential report recorded that "on 24 December 1933, red leaflets of the Jugantar party were distributed in the town announcing the indiscriminate murder of all Europeans, Anglo-Indians and loyal Indians who were helping Government."⁸⁸

Meanwhile, the Armoury Raid second supplementary case commenced on 15 June 1933, the main accused being Surya Sen, Tarakeswar Dastidar and Kalpana Dutta.⁸⁹ The trial was rapidly concluded within two months⁹⁰ and judgment was passed on 14 August sentencing both Surya Sen and Tarakeswar Dastidar to death, while Kalpana Dutta was sentenced to transportation for life.⁹¹ The Judgment declared, "Surya Sen as the master mind of conspiracy" and noted:

The principal offences are waging war against the king and conspiracy for that purpose. They have committed the offences deliberately after elaborate and extensive preparations and so far we can judge the accused are not repentant for their acts. ... Surya Sen was the leader of the party, he was recognised as much and was directly responsible for many acts of war resulting in the tragic death of many innocent persons and we are unanimously of opinion that the extent of his complicity and the nature of his activities are such that nothing less than extreme penalty will meet justice.⁹²

The Judges justifying their judgment noted:

It is in evidence that the previous conviction of and sentences imposed on other members of the conspiracy had no deterrent effect, but the conspiracy continued and for all we know it still continues. We have considered this question most anxiously and require the extreme penalty.⁹³

The accused filed appeal to the High Court but the High Court maintained the District Court's Judgment. The death sentences of Surja Sen and Tarakeswar Dastidar were executed in the Chittagong Jail on 12 January 1934.⁹⁴ Five days before the execution, on the evening of 7 January four revolutionary youths attacked the Europeans assembled at a cricket match in Paltan ground and threw bombs, fired shots at European. During this attack Nitya Gopal Sen of Mohammadpur and Himangshu Chowdhury of Habilashdwp were shot dead and Haren Chakraborty of Bagdandi and Krishna Chowdhury of Kelisahar were captured on the spot.⁹⁵ There was a short trial of Haren Chakraborty and Krishna Chowdhury and both were sentenced to death.⁹⁶

In consequence of the attack against the Europeans, the District administration was again seriously perturbed and issued many restriction notices using the Terrorists Suppression

Act. On 10 January 1934, the District Magistrate promulgated a notice prohibiting traffic on the roads in European localities at Chittagong town by general public.⁹⁷ Another prohibitory notice was issued on 18 January directing the Hindu middle class youths aged upto 25, residing in the Kotwali, Doublemoorings, Panchlaish, Patiya, Anawara, Raozan, Hathazari, Boalkhali police stations to remain within their residences for one week.⁹⁸ The District Magistrate justifying these measures said:

Terrorists were now determined to kill Europeans or Indians co-operating with the authorities. Orders, as passed, therefore were necessary under the circumstances created by terrorists for the safety of all citizens. The orders effected Hindu Bhadralog youths upto 25 years only, from among whom the terrorist organisation recruited their members, the number of the actual culprits might be a few, but they must have the assistance of a large number. Although they must keep indoors for a one week as ordered, it may be extended if necessary.⁹⁹

Later on the authorities served notices upon 300 persons including 100 students of Chittagong Government College to remain indoor for one month.¹⁰⁰ About the same time 18 students including Mahendra Ghosh, a teacher of Durgapur High School were arrested.¹⁰¹ Punitive taxes of about Rupees 36,000 were imposed upon the inhabitants of Chittagong Municipal areas and Pahartali towards the end of February 1934.¹⁰² It may be recalled that the authorities previously imposed collective fines Rs. 80,000 upon them and seven villagers following the Pahartali European Club attack (September 1932) by the rebels and the citizens paid these fines in spite of heavy economic sufferings. Now further imposition of punitive tax upon them created great hardship.

In fact, the action at the Paltan cricket ground concluded the revolutionary actions by the members of "the Indian Republican Army" of Chittagong branch which started following the Chittagong rebellion in April 1930. Nevertheless throughout the years 1934-35 the local administration continuously carried on their repressive measures through numerous arrests and detentions of the young men of Chittagong. Most of the youths of Chittagong had been confined within the confines of their home.¹⁰³ Punishments were given to many inhabitants for giving shelter to the revolutionaries during 1930-1934.¹⁰⁴ Thus the glorious era of the Chittagong revolutionaries was ended by physical, mental and economic sufferings of Chittagong people. However, it contributed very strongly to the struggle for the freedom of India.

Notes & References

1. On 18 April, 1930, Chittagong group of revolutionaries led by Surya Sen came out with armed uprising and attacked the Auxiliary force and police Armouries and captured the arms and ammunition, cut off communications by destroying Telephone and Telegraph lines and removed the railway lines between Dhoom and Joralganj north of Chittagong district to prevent police reinforcements from outside.
Letter from H. R. Wilkinson, C. I. E., I. C. S. District Magistrate of Chittagong to the commissioner of Chittagong Division, dated Chittagong 27 April 1930. *Govt. of Bengal, Home Poll, F/N. 243/30* part-v of 1930; *Amrita Bazar Patrika*, 20 and 22 April 1930; *Bangabani*, 20 April 1930.
1a. Amrita Bazar Patrika, 22 April 1930.
2. *Ibid.*, 22 April 1930.
3. *Ibid.*, 22, 23, 26, 29, 30 April, 1 and 10 May 1930; *Bangabani*, 24 April 1930.
4. *Govt. of Bengal, Home Poll, F/N. 296(76-80)/31* Part-IV of 1931.

5. *Govt. of Bengal, Home Poll, F/N. 243/30 Part-V of 1930.*
6. Letter from J. C. Farmer D. I. G. to Lowmen I. G. dated, Chittagong 6 May 1930; *Govt. of Bengal, Home Poll, F/N. 243/30 Part-V of 1930.*
- 6a. *Amrita Bazar Patrika*, 4 December 1930; *Govt. of Bengal, Home Poll, F/N. 885/30 of 1930 & 296 (76-80)/31 Part-IV of 1931.*
- 6b. *Govt. of Bengal, Home Poll, F/N. 855/30 of 1930.*
- 6c. *Liberty*, 8 August 1931.
7. *Govt. of Bengal, Home Poll, F/N. 296 (76-80)/31 Part-IV of 1931.*
8. *Amrita Bazar Patrika*, 30 January, 3 and 4 February, 1, 8, 12 and 26 March 1931.
9. *Govt. of Bengal, Home Poll, F/N. 30/31 of 1931.*
10. *Amrita Bazar Patrika*, 2 May 1931.
11. *Panchajanya*, cited in *Amrita Bazar Patrika*, 1 March 1931.
12. *Amrita Bazar Patrika*, 3 March 1931.
13. *Ibid.*, 3 March 1931.
14. *Ibid.*, 26 April 1931.
15. *Govt. of Bengal, Home Poll, F/N. 30/31 of 1931.* About the same time, Lt. Colonel G. C. B. Buckland, reported that they (revolutionaries) continued enlisting, "recruits" and established means of communication with the accused under trial. As a result they had brought considerable influence to bear on the local inhabitants and had reduced them to a state of neutrality. This was so much the case that even those who were previously "Loyal" and were good informant ceased entirely to render any help in that way. *Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 part-II of 1931.*
16. *Amrita Bazar Patrika*, 2 May 1931; *Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 and 296(76-80)/31 Part-IV of 1931.*
17. Protest meetings were held in mofussil areas such as, Patiya, Dhorala, Kanungopara, Saroatali, Sripur and other places of the district and denounced the posting of additional police and demanded the revocation of this oppressive decision. (Letter from S. P. Chittagong to the officer commanding, Chittagong, Letter No. 5/XI/S. P./C dated 7.5.31. *Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 of 1931*) The Chittagong Association sent a telegram to the Secretary to the Governor of Bengal protesting against the posting of punitive police force and demanding immediate redress. (*Amrita Bazar Patrika*, 9 May 1931. Also letter from S. P. Chittagong to the officer commanding, Chittagong letter No. 4/XI/S. P./C dated 6.5.31. *Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 of 1931.* The *Panchajanya* in an editorial commented:
Today, with due respect to the Delhi Pact, the people of the country are only voicing their protests. But if the Government do not do justice to them and have not the good sense of withdrawing this unjust Zulum, may be the words will turn into actions. Those who are somehow maintaining their lives are filled with anxiety to hear that an extra tax will have to be paid. But if the innocent and docile people once get desperate, no power of punitive police will be able to put down the unrest that will then be created. Perhaps Government would not desire to have a repetition of the lesson they had at Bardoli contai and Tamluk. (*Panchajanya*, 12 May 1931, RNNP(B))

The Superintendent of Police, Chittagong, in its confidential report noted:

Over and above the district Magistrate is being held responsible for all recent measures and the posting of additional police. All these measures are held to have been unnecessary and due to the Magistrate being unfit to discharge his duties. All his actions are considered oppressive as he has done nothing constructive. (*Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 Part-II of 1931*) However, no step was taken by the Govt. to withdraw punitive police force. On 20 May 1931 a joint memorandum of leading Hindu-Muslim citizens of Chittagong was submitted to the Governor of Bengal strongly protesting against the oppressive policy of the Government and imposition of punitive tax. The signatories of the memorandum were Rai Rebati Mohan Das, Tripura Charan Chowdhury, President Chittagong Association, Advocate Annada Charan Dutta, Noor Ahmed, Pleader, Sarada Charan Das, Dayananda Chowdhury, Secretary district Congress Committee, Kamal Uddin Ahmed, Noor Ali Muktear, Nagendra Lal Chowdhury, Golam Kader, Abdul Mazid Muktear, Jatra Mohan De, Hirendra Lal Chowdhury, Nizam Ali, Nikunja Singh, and Susanta Kumar Chowdhury and others. (*Amrita Bazar Patrika*, 22 May 1931) They appealed to the Governor to withdraw the military control of Chittagong and punitive police from the villages. (*Ibid*) On 21 May a representative deputation including some local Congressmen met the District Magistrate and drew his attention to the Gandhi-Irwin pact said that the situation might give a handle to the Congress to lodge the no-tax campaign which would involve the people and the

- authorities to unnecessary trouble for no fault of the villagers. The delegation noted that the authorities, by declaring that Hindus alone would be liable to the additional tax, were creating a division between Hindus and Muslims. (*Amrita Bazar Patrika*, 24 May 1931) The District Magistrate did not give any satisfactory answer (*Ibid.*). The *Amrita Bazar Patrika* wrote some editorials criticising the role of the local administration. (*Ibid.*, 5 and 6 May 1931). On 6 June in an editorial it wrote, the Magistrate had been informed that the Hindus were harbouring the absconding Armoury raiders, so it is they who must bear the costs of the punitive police and not the Muslim. We do not grudge our Moslem brethren living in these villages, and their good fortune in having escaped this punitive imposition. On the contrary we are glad that they will not have to pay this tax. The editor raised a question who informed the Magistrate that the Hindus were harbouring the absconding accused? And did the Magistrate test the truth or otherwise of the information? (*Ibid.*, 6 June 1931).
18. *Amrita Bazar Patrika*, 9 May 1931;
 19. Letter from A. H. Kemm I. C. S. District Magistrate of Chittagong to the commissioner of Chittagong, dated, Chittagong 11.5.31. *Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 part-II of 1931.*
 20. Letter from S. P. of Chittagong to Craig, Police Chief of Bengal, Dated, Chittagong 23.5.31, *Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 part-II of 1931.*
 21. Public Notice, issued by District Magistrate of Chittagong, *Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 part-II of 1931.*
 22. *Govt. of Bengal, Home Poll, F/N. 737/31 of 1931.*
 23. *Govt. of Bengal, Home Poll, F/N. 296(54-73)/31 part-II of 1931.*
 24. *Ibid.*
 25. *Ibid.*
 26. Early in the morning of 2nd June 1931, a young boy named Nibaran Ghosh dressed as coolie, was arrested from a road of the town while carrying a dynamite in his basket with the aim of setting it at an appointed place in the town. After the arrest, a number of dynamites that had been set up in various important places of the town and a very large quantity of materials for the preparation of dynamite were seized from different places of the city. (*Amrita Bazar Patrika*, 3 June 1931; *Govt. of Bengal, Home Poll, F/N. 296(76-80)/31 part-IV of 1931.*) In this connection a number of youths were arrested and a case was started naming dynamite conspiracy case with twelve youths (Nibaran Ghose, Nanda Kumar De, Chandra Bose, Ardhendu Guha, Sushil Sen, Prafulla Mallick, Nishi Das, Rabindra Sen, Probhat Dutta, Hriday Das, Ashu De, Anil Rakshit) and each of them were sentenced to five years imprisonment (*Liberty*, 13 August 1931; *Amrita Bazar Patrika*, 16 October 1931).
 27. *Amrita Bazar Patrika*, 5 June 1931.
 28. *Ibid.*, 7 June 1931; *Govt. of Bengal, Home Poll, F/N. 49k.w/31.*
 29. *Amrita Bazar Patrika*, 19 and 20 June 1931.
 30. *Panchajanya*, 10 June 1931, RNNP(B).
 31. *Govt. of Bengal, Home Poll, F/N. 345(1-17)/31.*
 32. *Ibid.*
 33. Letter from Superintendent of Police to the District Magistrate of Chittagong, dated Chittagong, 24 August 1931. *Govt. of Bengal, Home Poll, F/N. 296(76-80)/31 part-II of 1931.*
 34. *Amrita Bazar Patrika*, 1st September 1931; *Govt. of Bengal, Home Poll, F/N. 737/31 part-II of 1931.*
 35. Purnendu Dastidar, *Swadhinata Songrame Chattagram*, Chittagong, 1376 B. S., pp. 212-217.
 36. *Amrita Bazar Patrika*, 8 September 1931.
 37. *Ibid.*, 14 October 1931; Purnendu Dastidar, *op.cit.*, pp. 214-215.
 38. *Liberty*, 30 November 1931 RNNP(B).
 39. R. C. Majumdar, *op.cit.*, vol. 3, p. 412.
 40. *Panchajanya*, 12 December 1931, RNNP(B).
 41. *Amrita Bazar Patrika*, 2 and 10 December 1931.
 42. Report on the operation of Military and Police from 1st December 1931 to 7th March 1932 by the District Magistrate of Chittagong to the Commissioner of Chittagong division, dated, Chittagong 9 March 1932. *Govt. of India, Home Poll, F/N. 13/32*, cited in Nisith Ranjan Ray & others (ed.), *Challenge, A Saga of India's Struggle For Freedom*, New Delhi, January 1984, p. 72.
 43. *Amrita Bazar Patrika*, 31 December 1931.
 44. *Liberty*, 1, 4 and 20 January 1932.
 45. *Ibid.*, 18 March, 1 April 1932; *Amrita Bazar Patrika*, 28 April, 5 and 21 May, 7 June 1932.

46. *Amrita Bazar Patrika*, 10 June 1932. According to the District Magistrate, "Soon after the military activities began, the absconders became so careful in their movements that average Mohamedan villagers simply had no information to give. Amongst the Hindus there is no doubt that a very considerable section was in a position to give information and deliberately withheld it. Another fact which affected the obtaining of information from the public was the fear of reprisals after the troops and police were withdrawn. There was also apathy amongst the law abiding section of inhabitants and the passive and active sympathy with the absconders amongst the Hindus, which were not to be dispelled until they realised that Government meant business. We have certainly failed in our object, viz. to capture the absconder in this district." *Govt. of India, Home poll, F/N. 13/32*, cited in Nisith Ranjan Ray and others (ed.), *op. cit.*, p. 73.
47. *Amrita Bazar Patrika*, 2 March 1932; *Liberty*, 2 and 3 March 1932; *Govt. of Bengal, Home Poll. F/N. 174/32* of 1932. The revolutionary youngmen who were sentenced to transportation for life were Ganesh Ghose, Ananta Singh, Lokanath Bal, Ananda Gupta, Fanindra Nandi, Subodh Chowdhury, Sahayram Das, Fakir Chand Sen, Lal Mohan Sen, Sukhendu Dastidar, Subodh Roy, Ranadhir Dasgupta. Anath Bandhu Das and Nanda Lal Singh were sentenced to three and two years imprisonment respectively. The acquitted youths were Anil Bandhu Das, Nitaipada Ghose Santi Bhusan Nag, Aswini Kr. Chowdhury, Nani Gopal Deb, Mohin Bikash, Sripati Chowdhury, Modhusudan Guha, Subodh Biswas, Subodh Mitra, Sourindra Dutta Chowdhury, Sukumar Bhomik, Subodh Bal, Hermba Bal, Bijoy Kr. Sen, Asutosh Bhattacharjee, Dharendra Dastidar. *Ibid.*
48. Purnendu Dastidar, *op.cit.*, pp. 218-219; Kalpana Joshi (nee Dutta), Chittagong uprising and the role of Muslims, in Nisith Ranjan Ray and others (ed.), *op.cit.*, p. 67.
49. *Amrita Bazar Patrika*, 17 June 1932
50. Purnendu Dastidar, *op.cit.*, pp. 220-221.
51. *Amrita Bazar Patrika*, 17 June 1932. A large number of youths including Pulin Behari Das of Fateabad, Rebati Kanta Bhomik of Sitakundu, Sudhangshu Dutta of Guzra, Manindra lal Das of Noapara, Jogesh Chowdhury of Dhalghat, Nani Gopal of Allha and Tinkari Chowdhury of South Bhushi were arrested on suspicion that they were privy to the secret movements of the absconders in the Armoury raid case. *Ibid.*, 5 July 1932.
52. *Ibid.*, 6 August 1932.
53. *Ibid.*, 26 September 1932.
54. *Ibid.*, 24 June 1932.
55. *Amrita Bazar Patrika*, 19 and 20 July 1932. In this connection many students including Jalesh Ganguli, Upendra Guha Roy, Girendra Chakraborty, Ranadhir Dasgupta and others were arrested. *Ibid.*
56. *Ibid.*, 5 and 20 July, 24 August 1932.
57. Ganesh Ghose, Chittagong uprising and its impact, Kalpana Joshi (nee Dutta), Chittagong uprising and role of Muslims in Nisith Ranjan Ray and others (ed.), *op.cit.*, pp. 33, 66.
58. *Liberty*, 26 September 1932; *Amrita Bazar Patrika*, 27 and 28 September 1932.
59. *Govt. of Bengal, Home Poll, F/N. 685(2-3)/32*
60. *Ibid.*
61. *Amrita Bazar Patrika*, 30 September, 2, 23 October, 2 November, 1932. *Liberty*, 30 September, 1932; Purnendu Dastider, *op.cit.*, pp. 238, 254. The following were the prominent persons who were arrested in connection of Pahartali happening: Monoranjan Dutta (Quepara), Harihar Dutta (Chanbara), Nani Gopal Das (Chakrasala), Sukhendu B. Bhattacharjee (Malpara), hemendra Sen (Noapara), Beni Chakraborty (Rahamtgonj), Nani Gopal Chakraborty (Kelisahar), Saraj Das (Enath Bazar), Probbhat Bhattacharjee(Suchia), Amiya Guha (Noapara), Naresh Chandra Sen(Saroatali), Chittaranjan Das(Chakrasala), Anath Bandhu Das (Sultanpur), Nirendra Dutta (Chanbara), Chattalesh Chowdhury (Ddhalghat), Nikunju Behari Chowdhury (Sakpura), Sushil Das (Noapara), Kamaniya Kumar Das (Quepara), Nani Gopal Chakraborty (Madaras), Ramani Muhari (Binajuri) and others. *Amrita Bazar Patrika*, 2 November 1932.
62. *Liberty*, 11 October, 7 December 1932; *Amrita Bazar Patrika*, 12 October, 6 December 1932.
63. *Amrita Bazar Patrika*, 19 October, 2 and 13 November 1932.
64. Statement issued by the Govt. of Bengal, dated, Darjeeling 29 September 1932. *Amrita Bazar Patrika*, 30 September 1932; *Liberty*, 30 September 1932.
65. *Amrita Bazar Patrika*, 27 October 1932; *Liberty*, 27 October 1932. The nationalist daily *Amrita Bazar Patrika*, 10 June 1932, wrote an editorial strongly criticising the Government's communique regarding the imposition of collective fine thus:

The Justification for the imposition of this heavy fine in the assumption that many people in Chittagong are in possession of facts about the terrorists and that they have not communicated them to the authorities. We do not know what materials the authorities may have in their possession from which an inference like this can legitimately be drawn ... If however, the circumstances and the chain of events in Chittagong justify the drawing of any inference at all it is that none, if any, of the honest citizens, both Hindu and Muslim, possesses any information about the terrorists or about the outrage committed at Pahartali. One reason for holding such a view is that if these facts were so widely known, as the authorities seem to believe, it would not have been difficult for the police and C. I. D. officers and we believe there is no want of them in Chittagong – to know them also. Indeed, if the police have hitherto failed, which they apparently have, to obtain satisfactory information about the terrorists this fact alone is a strong argument in favour of the supposition that the general mass of the inhabitants of Chittagong are also in the dark about them.

Amrita Bazar Patrika, 28 October 1932.

66. *Amrita Bazar Patrika*, 26 November, 6 December 1932.

67. *Ibid.*, 27 November 1932.

68. *Liberty*, 17 and 18 December 1932.

69. *Ibid.*, 18 December 1932.

70. *Amrita Bazar Patrika*, 1 and 3 November 1932.

71. Subhas Chandra Bose, *The Indian Struggle for Freedom*, Calcutta, 1981, p. 281.

72. Kalpana Dutta wrote, "Government measures did hamper the movement of the absconders. The old shelters could not be used for long except for one or two days. And we had to change shelters very frequently. Masterda divided the absconders into small groups to spread out in the less suspected police station". Nisith Ranjan Ray and others (ed.), *op.cit.*, p. 67.

73. *Amrita Bazar Patrika*, 19 November 1932.

74. Among them Sudhanshu Sarkar, Kshirode Sen (who were arrested while trying to throw red leaflets in to the house of an I. B. Inspector), Dwigendra Das, Sachindra Chowdhury, Raj Bihari Pal, Anil De, Ramani Ghose, Kshitish Kanungo, Chattalesh Chowdhury, Dipti Medha Chowdhury Chittaranjan Das, Jiten Rai Chowdhury, Pulin De, Jyotimay De, Narendra Lal Dutta, Gunendra Lal Dutta, Bireswar Roy, Promode Ranjan Dasgupta, Naresh Chandra Sen, Anil Dutta, Bejoy Sen, Kasiswar Dutta, Nanigopal Dasgupta, Sureswar Chakraborty, Tagendra Das and Dharendra Dastidar were prominent. *Amrita Bazar Patrika*, 4, 5, 8 and 10 January 1933, 9 and 19 February 1933, 1, 8, 9, 21 and 29 March 1933.

75. On information from a greedy petty landlord named Netro Sen, a band of Military and Police surrounded the house of Kshirode prava at night where Surya Sen and his four revolutionary associates (Miss. Kalpana Dutta, Santi Chakraborty, Mani Dutta and Sushil Dasgupta) took shelter. The revolutionaries opened fire on the Military and police and the force replied with counter firings. After a skirmish the revolutionaries decided to escape. But though Kalpana Dutta and others escaped crossing the Military and police cordon, Surya Sen was arrested. Soon Brojen Sen of Gairala, a prominent associate of Surya Sen was also arrested. *Ibid.*, 19 February 1933; *Govt. of Bengal, Home Poll. F/N. 580(1-5)/34*; Nisith Ranjan Ray and others (ed.), *op.cit.*, p. 68.

Later on the Chittagong revolutionaries decided to punish Netro Sen and accordingly he was killed by a revolutionary on 8 January 1934. While, the British Government gave compensation to his family 1934. While, the British Government gave compensation to his family as follows:

(i) Manikuntala Sen, widow- a pension of Rs. 6 per menses until remarriage or death. (ii) Subodh Ranjan Sen – son aged 12 – a pension of Rs. 5 per menses until he attains the age of 20 or death, whichever is earlier. (iii) Chinmoyee Sen, daughter aged 5 – a pension of Rs. 4 per menses until marriage or death, whichever is earlier and a lump sum of Rs. 200 be invested and to be paid at the discretion of the District Magistrate. Magistrate to be appropriate person on the occasion of her marriage for expenses in connection therewith.

Letter from J. George, Esq. I. C. S. under Secretary to the Govt. of Bengal to the Commissioner of the Chittagong Division, Darjeeling, 12th September 1934. *Govt. of Bengal, Home poll, F/N. 580(1-5)/34*.

76. *Amrita Bazar Patrika*, 22 March 1933; Sachindra Nath Guha (ed.), *Chattagram Biblober Bahnisikha*, Calcutta, 1974, p. 54.

77. *Amrita Bazar Patrika*, 22 March, 16 August 1933.

78. *Ibid.*; 6, 7, 8, 14, 15, 19, 20, 22 and 27 January 1933; 1, 7 and 12 February 1933. Regarding death sentence to Ambika Chakraborty the majority of the Judges held, "his complicity in the crime is so great that to meet the ends of Justice nothing less than the extreme penalty of law be given". One of the Judges who was a Muslim, Mr. Rahaman, was of opinion that instigation was

not as much as to justify the extreme penalty of law though it had been proved that he was deeply in the plot. *Ibid.*, 12 February 1933.

79. *Amrita Bazar Patrika*, 1 March, 4 May 1933.
80. Purnendu Dastidar, *Op.cit.*, pp. 254-256.
81. *Amrita Bazar Patrika*, 21 May 1933.
82. *Ibid.*, 24 and 27 May 1933, 23 June 1933; 9, 11, 15, 21 and 26 July 1933; 16, 24 and 30 August 1933.
83. *Amrita Bazar Patrika*, 31 May, 14 September, 3, 5 and 20 October 1933. It may be noted here that three kinds of card were issued, red for detenus in home and village domicile, blue for credible suspicion and white for law abiding citizens. *Ibid.*, 14 September 1933.
84. *Ibid.*, 21 September 1933.
85. *Ibid.*, 5 October 1933.
86. *Amrita Bazar Patrika*, 20 October, 10 November 1933.
87. *Ibid.*, 3 and 5 October 1933.
88. Letter from District Magistrate, Chittagong, to the Commissioner of the Chittagong Division, dated Chittagong, 24th June 1934. *Government of Bengal, Home poll.* 580 (1-5)/34.
89. The proceedings of this case were done inside Chittagong Central Jail.
90. *Amrita Bazar Patrika*, 24 and 29 June 1933; 1, 6, 8, 9, 13, 15, 16, 18, 21, 23, 25, 26, 27 and 29 July 1933; 2 August 1933.
91. *Amrita Bazar Patrika*, 5 August 1933. They appealed to the High court against their sentence but the High Court restored the sentence. *Ibid.*, 15 November 1933.
92. The Judges dealing with Tarakeswar Dastidar case remarked, "the question of appropriate sentence has presented more difficulty in this case. We do not find that he did take any active part in the armoury raid of 1930 or any of the events acts of war until Gahira where he was arrested. We have however found that he had connection with conspiracy from its inception. We have also found that he was in charge of the party at Gahira and at that time actively assisted in carrying out the conspiracy for warring after Surya Sen's arrest." *Ibid.*, 15 August 1933.
93. *Ibid.*
94. Purnendu Dastidar, *op.cit.*, pp. 261-268.
95. *Amrita Bazar Patrika*, 9 and 11 January 1934; *Govt. of Bengal, Home poll*, F/N. 580(1-5)/34.
96. *Amrita Bazar Patrika*, 23, 25, 27, 28 and 30 January 1934; 1 February 1934.
97. *Ibid.*, 11 January 1934.
98. *Ibid.*, 19 January 1934.
99. *Amrita Bazar Patrika*, 20 January 1934.
100. *Ibid.*, 25 and 27 January 1934.
101. They were Sudhangshu Chakraborty, Sukhamoy De, Sudhir Nandi, Sudhir De, Nagendra De, Sasankha Bhowmik, Jitendra De, Bisweswar De, Nipendra Nag, Sudhir Majumdar, Mahendra Baidya, Sukhendu De, Khagendra Bhowmik, Monoranjan Bhowmik, Sukhendu Bhowmik, Sachindra De, Sudhir Singha, Pulin Bhowmik., *Ibid.*, 16 January 1934.
102. *Ibid.*, 22 June 23 August 1934.
103. *Amrita Bazar Patrika*, 15 and 30 March 1934; 17, 20 and 29 April, 19 May, 5 June, 21 and 25 July, 17 August, 9, 12, 25 and 29 September 1934; 22 February, 14 April, 2, 6 and 30 July, 17 August, 29 September 1935.
104. The followings were a brief account of some harbouring cases:
 - 1) On 22 January 1934 Dr. Ramani Das of Barama and his servant were sentenced to 18 months and one year rigorous imprisonment respectively for giving shelter to Sushil Dasgupta, a proclaimed offender in the Surya Sen harbouring case. (*Ibid.*, 23 January 1934). It may be noted here that Surya Sen harbouring case was started with eight accused including two women. (*Ibid.*, 22 April 1933).
 - 2) The Special Magistrate S. N. Ray convicted Bharat Dutta of Bidagram and sentenced him to 18 months R. I. for harbouring Kalkinkar De of Gosaidanga, absconder in the dynamite conspiracy case and Manindra Dutta of Kasaish. (*Ibid.*, 19 May, 3 July 1934).
 - 3) Ramani Chowdhury of Habilashdwp was sentenced to 18 months R. I. for giving shelter to Santi Chakraborty of Kattali and Nipendra Dastidar of Soroatali. (*Ibid.*, 29 June 1934).
 - 4) The Gohira Harbouring case was the more prominent among the harbouring cases which was started against nine accused for harbouring Tarakeswar Dastidar, Miss Kalpana Dutta and others. Eight accused out of nine including three women were sentenced to various period. They were Prasanna Talukdar, Sudhindra Das, Monoranjan De, Harendra De, Birendra De, Srimati Janakibala

- Talukdar (wife of Prasanna Talukdar), Bijanbala Talukdar (wife of Purna Talukdar) and Kamaribala. (*Ibid.*, 1 August 1934; *Advance*, 3 October 1934.)
- 5) On 2 June 1935, Prakriti Barua and Upendra Das were sentenced to six months R. I. for helping Birendra Chowdhury, a young revolutionary of Chittagong group. (*Amrita Bazar Patrika*, 5 June 1935.)
 - 6) Sabitri Debi, Dinesh Dasgupta, Ramkrishna Chakraborty, Manindra De, and Ajit Biswas were sentenced to 4 years R. I. for sheltering the accused of the Dhalghat conspiracy case which was started in connection to the Dhalghat incident in June 1932 where Captain Cameron was shot dead by the revolutionaries. (*Ibid.*, 25 October 1932.)

ENVIRONMENTAL COMPLIANCES OF URBAN DEVELOPMENT PROJECTS IN BANGLADESH

A.K.M. Mahmudul Haque*

Abstract: Existing environmental rules and regulations of Bangladesh prescribe concerned authorities to integrate environmental issues at the time of planning and implementation of development projects to protect environment from degradation. The main purpose of this paper is to explore the extent of environmental parameters integrated during planning and implementation of urban development projects. The study employed a case oriented qualitative research method. Rajshahi City Corporation has been selected as the unit of analysis. The study has evaluated the environmental compliances of development projects on the basis of Development Project Proforma (DPP) and Project Completion Report (PCR) collected from the Rajshahi City Corporation. The data reveals that consideration of environmental issues is ignored to a greater extent when development projects are planned and implemented.

Introduction

Impact of infrastructural development on environment is increasing due to interference in the environmental settings in most developing countries because of unplanned development activities. Local government bodies in Bangladesh have been vested with planning and implementation of a wide range of development activities like construction of roads, bridges, culverts, housing, potable water supply and irrigation, flood control, recreation centre and markets, etc. with a view to improving the socio-economic conditions at rural and urban levels of the country.¹ Environmental compliance in case of such development activities is very much essential to reduce the anticipated downgrading of environmental issues in the near future. Urban-Local government bodies in Bangladesh usually implement a wide variety of infrastructure development projects every year which include, road construction, drainage development, building construction, water supply, flood control, etc. In accordance with the legal framework, during planning and implementation of these projects, it is important to measure the environmental impact of these projects to protect the environment from degradation. Environmental governance presents a set of environmental protection parameters to analyze the adverse environmental consequences of the projects and adopt appropriate measures to eliminate or reduce or avoid such adverse consequences to acceptable levels through proper planning and implementation of the project. Several research reports reveal that present urban environmental condition of Bangladesh is not improving, rather it is deteriorating day by day despite there are adequate environmental laws. Many reasons act behind this

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¹ Asian Development Bank, *Country Environmental Analysis: Bangladesh* (Manila: Asian Development Bank, 2004), p. 30.

situation. One of these reasons is that concerned rules and regulations are not properly enforced by the urban authorities during planning and implementation of development projects. Consequently, urban physical and biotic environment is being changed significantly and other environmental problems are taking place. So, proper study is required to measure the extent of which urban bodies obey rules and regulations in considering environmental issues in their development projects. This article is an in-depth investigation on Rajshahi City Corporation (RCC) in terms of its role to integrate environmental issues in the planning process of development projects.

Research Methodology

The study has been conducted on project activities of RCC covering a total area of 97 sq. km. with a population of nearly 800,000. The study intends to explore the degree of environmental issues considered during planning and implementation of government financed infrastructure development projects of RCC. From this view point the study is an evaluative one. It is mainly based on primary and secondary data that include study field, selected development projects, government rules and policies, various research reports and articles, official statistics, relevant books, daily newspapers, World Wide Web etc. Face to face interview and content analysis in the form of qualitative have been used in the study to collect data.

The study area, RCC, has been selected purposively. Currently, all the City Corporations of Bangladesh are functioning under the "Local Government (City Corporation) Act, 2009." Principal sources of fund for development activities of all City Corporations are the allocation from the government and the donor agencies that stipulate same guidelines for environmental compliances. The study on RCC thus may be representative of the City Corporations in Bangladesh.

Environmental Compliance Procedures of Development Project

Different environmental rules and regulations provide different procedures to consider environmental issues in the development activities of the country. These rules and regulations emphasize mainly on the obligation of environmental clearance from the Government and undertaking Environmental Impact Assessment (EIA)² depending on categories of the proposed projects. According to Environment Conservation Act (ECA), 1995, "No industry shall be established and no project shall be undertaken anywhere without obtaining environmental clearance from the Director General (DG) of Department of Environment (DoE), in the manner prescribed by the rules". The rules of preparing EIA for the proposed development projects in Bangladesh have been stipulated by Environmental Conservation Rules, 1997. The legal procedures of environmental clearance and EIA are described below.

Procedure of Environmental Clearance

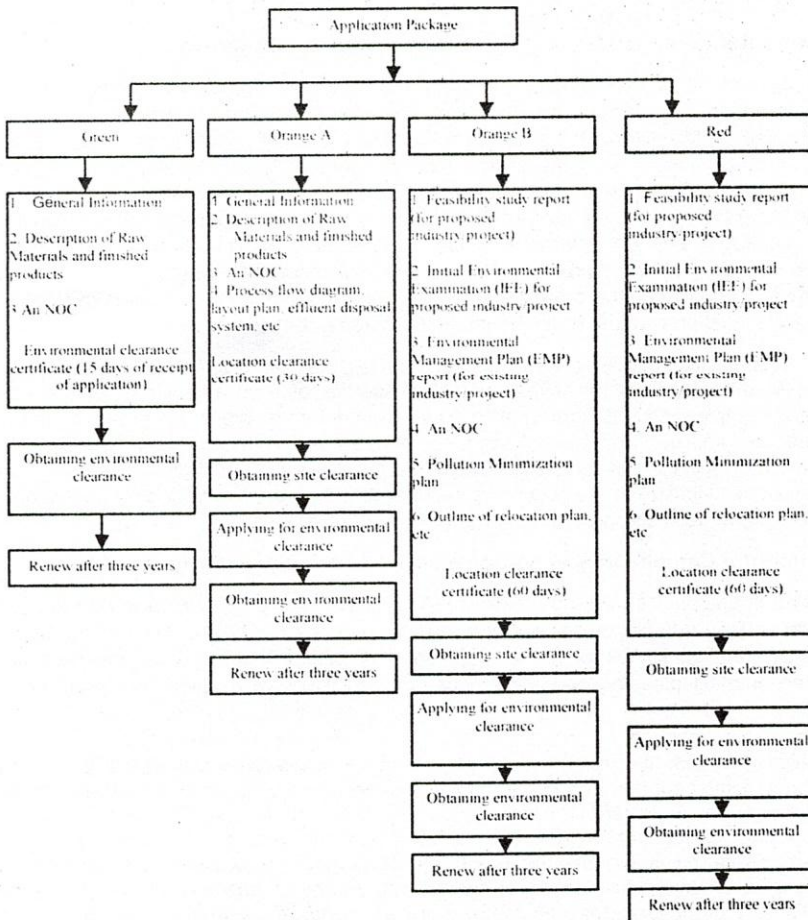
Environmental Conservation Rules, 1997 provide a framework for environmental evaluation of proposed development projects in all sectors and prescribe procedures for obtaining environmental clearance certificate. According to the procedures, the developers should initially obtain a location clearance certificate from the DoE and then conduct an

² EIA is a process used to predict the environmental consequences of a proposed development project. It not only examines how the project might affect the environment, but also goes on to consider what measures might be introduced to mitigate the damaging environmental effects of the project and finally tries to inform the decision-makers on the options for avoiding or reducing the adverse impacts and to analyze the trade-offs involved in choosing between alternative actions.

environmental study of the development project. The Rules have classified the projects into four categories on the basis of their site condition and environmental impacts. These are, (a) Green, (b) Orange A, (c) Orange B and (d) Red. Different procedures are mentioned for environmental clearance certificate for each category of project. According to the rules, environmental clearance certificate is issued to all existing and proposed industrial units and projects, under Green category without undergoing EIA. For the category of Orange A and B and Red projects, it requires location clearance certificate, EIA and the satisfactory submission of the required documents.

For environmental clearance certificate, the project proponent should apply to the concerned Divisional Officer of the Department through prescribed format (Form 3, mentioned in Rule 7). They should be accompanied with the documents as specified in Figure 1.

Figure 1
Procedure of environmental clearance for development projects



Source: S. Mumtaz, "Environmental Impact Assessment in Bangladesh", *Environmental Impact Assessment Review*, vol.22 (2002), p. 166.

Procedure for Environmental Impact Assessment (EIA)

Environmental Impact Assessment (EIA) is a project planning tool used for environmental protection and achieving sustainable development.³ It is a prediction or forecasting of the future state of the environment as a consequence of the development activity. EIA process of the development project in Bangladesh consists of six steps. These are:

- i) Project Screening based on Schedule 1 of ECR
- ii) Preparation of Initial Environmental Examination/Evaluation
- iii) Issuance of Site Clearance Certificate
- iv) Preparation of the Terms of Reference
- v) Submission of Draft EIA Report
- vi) Submission of the final EIA Report with Management and Monitoring Plan

Environmental Compliances in Project Preparation and Approval

Planning Commission invites project proposals from different Ministries or agencies as per national priorities reflected in the Five Year Plan objectives. Project executing agencies select suitable projects through conducting preliminary feasibility studies and thus prepare project profiles with a prescribed format named as, Development Project Proforma/Proposal (DPP).⁴ The DPP guidelines (Section 23 of DPP) contains the provision of a brief description of the effect/impact of the project and specific mitigation measures of adverse impact if any on environment like land, water, air, bio-diversity etc.⁵ Every executive agency of the project has the responsibility to identify the potential environmental impacts of the project and suggest specific mitigation measures in the DPP following the legal procedures of environmental assessment of the project.

Preparation, processing and approval procedures of development projects may vary due to differences in the investment size, sources of fund and nature of projects. Moreover, separate project proforma is used for different types of projects and is processed and approved by the different committees and councils. But in principle, all development projects under different ministries are initially examined by the Planning Cell of the respective Ministry in the context of sectoral targets, allocations, priority and viability before forwarding to the appropriate authority for further processing.

Environmental Compliances in Some Selected Development Projects of RCC

Local government bodies in Bangladesh like *Pourashava* and *City Corporation* design and implement a large number of development projects every year. Environmental legislations stipulate different guidelines for the local government bodies to incorporate environmental parameters into all planning and implementation processes of development program to

³ R.B. Khadka and U.S. Shrestha, "Process and Procedures of Environmental Impact Assessment Application in Some Countries of South Asia: A Review Study", *Journal of Environmental Science and Technology*, vol. 4 (3), (2011), p. 215.

⁴ Development Project Proforma/Proposal (DPP) means the proposal of the project to be undertaken, which mainly includes the location of the project and objectives, components and estimated cost summary, justification of the project, source of finance and benefits of the project. The DPP of the project is prepared by executive agency of the project.

⁵ GoB Circular, *Preparation, Processing and Approval Procedures of Development Projects* (Dhaka: Planning Division, Ministry of Planning, 2008), p.25.

ensure environmental sustainability. RCC planned and implemented a total of nine development projects from 1993 to 2010 under the allocation of Annual Development Program (ADP). Among them, six infrastructure development projects have been selected purposively for this study to assess the extent of environmental compliances.

Project Name: "Construction of Lakshipur-Kasiadanga Road in Rajshahi City"

This project was implemented by RCC during April 1994 to June 2003 through the funds of the Ministry of LGRD and Co-operatives/Local Government Division under Annual Development Program. The location of this project was Baharampur, Dingadoba, Horagram, Kasiadanga and Goalpara areas under the administrative boundary of RCC. Its actual expenditure was Tk. 162.2 million.⁶ In the context of excessive pressure on the city roads, RCC took the project with a view to strengthening the road network effectively. The implementation of this project has established a first phase access of the west and north-west parts of the city as well as adjacent Nawabgonj district to the city centre. The DPP mentioned that it would strengthen the city economy as well as the city environment.⁷

Environmental Compliances of the Project

Major components of the project include land acquisition, land development and construction of national highway standard road along with the pavement and drains. The project also included installation of highway lighting system along the total roadway and automatic traffic signal system at 6 intersections and 2 airway level crossings to promote the safe and sufficient movement of the vehicular and pedestrian traffic.⁸

In DPP, regarding environmental impact of this project, it is stated that planned development in transport management would contribute to creating healthy environment of the city. With the development of effective city road network linked with the regional highways, socio-economic development of the city would also be enhanced. Regarding sustainability of the project, it is stated that the output of the completed project is mainly a road which would result into the development of communication system. So, the socio-economic development of the city would be improved and the physical sustainability of the project will be achieved in the long-run.⁹

Though this project would establish an effective communication system within the city, the implementation of this road development project may change the natural topography and land use pattern in the project area. The present green scenic beauty may disappear and water bodies may be lost. Moreover, with the completion of this project, loss of biodiversity will take place because of felling of trees and filling up of water bodies. The project has promoted the safe and sound movement of vehicles and pedestrians which may be the cause of huge dust generation and noise pollution. It will be hazardous for human and environmental health. Likewise, because of the construction of this road, population density will be increased which in turn will increase the usages of other resources by the people. Thus, population density will generate more wastes. So, specific

⁶ Project Completion Report, *Construction of Lakshipur-Kasiadanga Road in Rajshahi City* (Rajshahi: Rajshahi City Corporation, 2002), p.12.

⁷ Development Project Proforma, *Construction of Lakshipur-Kasiadanga Road in Rajshahi City* (Rajshahi: Rajshahi City Corporation, 2002), p. 4.

⁸ Ibid, pp. 19-20.

⁹ Project Completion Report, *Construction of Lakshipur-Kasiadanga Road in Rajshahi City* (Rajshahi: Rajshahi City Corporation, 2002), p. 13.

mitigation measures of these adverse impacts on environment and natural resources have not been suggested during planning and implementation of this project.

Project Name: "Construction of Children's Park of Rajshahi City Corporation"

RCC implemented this project during February 2004 to November 2005 funded by the Ministry of LGRD and Co-operatives/Local Government Division under Annual Development Program. The location of this project was Baro-Bonogram, a built up area in the north east of the city. Its actual expenditure was Tk. 108 millions.¹⁰ Considering the recreational facilities and amusement for the children, RCC implemented this project. The main objective of this project was to provide a sound and healthy setting for the psychological development of the children of Rajshahi City.¹¹

Environmental Compliances of the Project

Major components of this project include land development & landscape, decorative boundary wall, internal and external park road, office, food corner, water & sanitation facilities, electrical substation, poles, insulated wires and cables, sodium, halogens, mercury and decorative lamps, pole erection, cable laying and essential electrical fittings, fixings etc. The project components also include the installation and commissioning of various types of imported mechanical and non-mechanical game equipment.¹²

The PCR shows that the project had been implemented with sound planning. Due to implementation of the project, the park would establish a healthy environment for the children of the city and in due course, it would contribute to the achievement of higher productivity and socio-economic growth of the city.¹³

The constructed children's park would enhance and influence the child development in respect of psychological, creative, educational and social aspects. The project may also produce some adverse environmental impacts which were not identified at the time of project planning and implementation. Since the project has included a vast area of agricultural land, the topography of the project area will be changed; agricultural environment will be converted into urban and semi-urban area. The natural beauty will disappear; water bodies will be filled up and polluted. Wild animals, birds and fishes may lose their habitats and as a result, loss of bio-diversity may take place. In the DPP, there was no proposal for the enhancement of plantation and gardening to increase the scenic beauty of the project area. After the implementation of the project, a temporary market place and a huge gathering will take place in the park side. As a result, a huge waste will also be generated and the demand for potable water will increase. Therefore, more wells and pipelines will be needed to meet the demand for drinking water. These issues were needed to be considered through undertaking proper environmental assessment during planning and implementation of the project.

¹⁰ Project Completion Report, *Construction of Children Park of Rajshahi City Corporation* (Rajshahi: Rajshahi City Corporation, 2005), p. 12.

¹¹ Development Project Proforma, *Construction of Children Park of Rajshahi City Corporation* (Rajshahi: Rajshahi City Corporation, 2005), p. 23.

¹² Project Completion Report, *Construction of Children Park of Rajshahi City Corporation* (Rajshahi: Rajshahi City Corporation, 2005), p. 11.

¹³ Development Project Proforma, *op.cit.*, p. 13.

Project Name: "Construction of City Bhaban Complex of Rajshahi City"

This project was implemented by RCC during March 1997 to December 2002 under Annual Development Program of the Ministry of LGRD and Co-operatives/Local Government Division. The location of this project was Kadirganj area under administrative boundary of Rajshahi City Corporation. Its actual expenditure was Tk. 99.5 million.¹⁴ The project was launched to increase the potentials and efficiencies of RCC's staff who can work at a good functional building. DPP stated that it would enhance the service rendering facilities to the city dwellers. The project was designed analyzing the factors of location, inter-departmental relation and their nature and frequencies, office space in general and other essential elements.¹⁵

Environmental Compliances of the Project

The project includes the construction of two main buildings, viz, (i) 10 storied Office Building and (ii) 2 storied Auditorium Building. This project includes two phases. 1st phase program includes 5 storied office building with 5662.45 sqm. Total floor area had been constructed with a foundation of a 10 storied building. In addition, for the micro-environmental demand, a raised plaza had also been constructed between the office building and the main road. This plaza allows the office building to have its institutional scale.¹⁶

Impact of the project on environment is stated in the DPP as positive. DPP shows that working at a good functional building will enhance the potentialities and efficiencies of RCC's staff; it would have ultimately good contribution in implementing the environmental improvement program in the city. The building would have good functional facilities; RCC could be able to provide better and more sustainable services with effective planning.¹⁷ From the project documents, no specific environmental assessment was found to be done to predict the likely environmental impacts of the project and to find ways of mitigating adverse impacts, if any. In the main administrative building of RCC, a huge gathering of general people may be a common feature from which more waste will generate that may affect the environment adversely. Moreover, any construction work hampers green scenic beauty of the city which requires the provision of added plantations. These matters were not taken into consideration during designing and executing of the project.

Project Name: "Construction of Drains to Alleviate Water Logging Problem at Rajshahi City (1st Phase)"

This project was also funded by the Ministry of LGRD and Co-operatives/Local Government Division under its Annual Development Program. Based on the recommendations of the feasibility study of 1993, the 1st phase drainage project was started in 1994. Total cost of the project was estimated at Tk. 203.8 million, but finally it turned to Tk. 230.6 million after three times reappropriation. About 34.75 km primary drain, 15.58 km secondary drain, 79 culverts and 2 flood rehabilitation centers were constructed under this project. Main objective of the project was to improve the environmental aspects for the people of

¹⁴ Project Completion Report, *Construction of City Bhaban Complex of Rajshahi City* (Rajshahi: Rajshahi City Corporation, 2002), p. 13.

¹⁵ Development Project Proforma, *Construction of City Bhaban Complex of Rajshahi City* (Rajshahi: Rajshahi City Corporation, 1997), p. 6.

¹⁶ Project Completion Report, *Construction of City Bhaban Complex of Rajshahi City* (Rajshahi: Rajshahi City Corporation, 2002), pp. 12-13.

¹⁷ *Ibid.*, p. 14.

Rajshahi City by reducing drainage blockage and water logging through the provision of proper drainage system and to reconstruct the drains which were damaged due to devastating flood of 1998 in different inundated wards.¹⁸ The whole project was completed in June 2003.

Environmental Compliances of the Project

Project elements mainly include the building of primary and secondary drains at the areas recommended in the feasibility study. The DPP shows that environmental health of the citizens and the creation of planned and effective drainage network would directly contribute to the improvement of the environmental health of the city because of the development of drainage system.¹⁹ The project would be physically sustainable and the output would create a healthy environment in the city.

RCC conducted a feasibility study and prepared a Drainage Master Plan in 1993. The Drainage Master Plan recommended the implementation of phase-wise drainage construction projects up to the year 2020. The Environmental Impact Assessment of the drainage projects was also done at the time of preparing Master Plan. On the basis of some environmental parameters, an environmental rating matrix of proposed intervention of the drainage projects has been presented in the plan. In the assessment matrix, the scoring has been done within a 21 point score scale ranging from -1 to -10 for negative impacts and +1 to +10 for positive impacts while '0' was used for no impact (neutral impact).²⁰ Although the overall environmental impact of the drainage project in the drainage master plan has been evaluated as positive, it did not suggest any specific mitigation measures for the adverse consequences of the project.

Project Name: "Construction of Drains to Alleviate Water Logging Problem at Rajshahi City (2nd Phase)"

The second phase drainage project started its operation on 1 July 2004. Main objective of the project was to improve the environmental aspects of Rajshahi City Corporation by reducing incidence of drainage blockage and water logging ensuring proper drainage system within the priority areas.²¹ Total cost of the project was Tk. 215.05 million. The whole project was completed on 30 June 2006. About 9.40 km primary drain, 9.97 km secondary drain and 4 railway culverts were constructed under this project.²²

Environmental Compliances of the Project

With a view to incorporating the environmental protection parameters in the project preparation, RCC carried out EIA for both 1st and 2nd phase drainage development projects at the time of preparing Drainage Master Plan. The EIA of these projects valued impacts of the projects on environment as positive. In the same way, the DPP of both projects show

¹⁸ Development Project Proforma, *Construction of Drains to Alleviate Water Logging Problem at Rajshahi City (1st Phase)* (Rajshahi: Rajshahi City Corporation, 1994), p. 7.

¹⁹ Project Completion Report, *Construction of Drains to Alleviate Water Logging Problem at Rajshahi City (1st phase)* (Rajshahi: Rajshahi City Corporation, 2003), p. 15.

²⁰ Rajshahi City Corporation, *Feasibility Study and Preparation of Drainage Master Plan for Rajshahi City Corporation* (Dhaka: Aqua Consultation & Associates limited, 1993), pp. 109-112.

²¹ Development Project Proforma, *Construction of Drains to Alleviate Water Logging Problem at Rajshahi City (2nd Phase)* (Rajshahi: Rajshahi City Corporation, 2004), p. 5.

²² Project Completion Report, *Construction of Drains to Alleviate Water Logging Problem at Rajshahi City (2nd phase)* (Rajshahi: Rajshahi City Corporation, 2006), p. 14.

that the improvement of drainage system would improve the environmental health of the city and the creation of planned and effective drainage network would directly play an important role in improving the environmental health of the city areas.²³

It is found that both 1st phase and 2nd phase drainage project components mainly include the construction of primary and secondary drains at the priority areas as suggested in the feasibility study. The implementation of these drainage projects has developed healthy living environment in the city to a large extent. But the projects have some adverse environmental impacts mitigation measures of which were not suggested at the time of planning and implementation of the project. The constructed drains are typically uncovered that will increase health risk for the city dwellers. Parasitic diseases like dengue, malaria and fileria may increase in the project area. Waste water, sanitary sewage etc are the main causes of surface water pollution of Padma and Barnai rivers and beels and ponds. With the implementation of these projects, the pollution of surface water may further increase because of high volume of waste water discharge, sanitary sewage, over spilling of pit and septic tank, industrial effluents, etc.

After the implementation of both 1st and 2nd phase drainage development project, discharge of major drains has been passing through the Shilinder beel to Tikure beel. The main outlet of these beels is Duari Khal, which is silted up and nearly dead and can not carry the discharge to the Barnai River in dry season. As a result, lowlands including these beels go under water and farmers can not grow crop in dry season. On the other hand, these two beels remain water logged and farmers can not grow crops.²⁴ In that situation, more discharge of wastewater will increase the loss of crops and aquatic resources of these beels.

Project Name: "Construction of 50 Bed City Hospital at Rajshahi City Corporation"

RCC implemented this project during November 1993 to October 1997 funded by the Ministry of LGRD and Co-operatives/Local Government Division under Annual Development Program. The location of this project was Rani Nagar area under Administrative area of RCC. Total expenditure of this project was Tk. 14.8 million. The project was undertaken to provide better health service for the city dwellers and to develop effective and efficient health management. Consequently, RCC's health care system would be improved.²⁵

Environmental Compliances of the Project

The project documents contain no study of EIA to determine the potential impacts of the project on environment. Even, no statement about environmental impacts or the socio-economic impact of the project is found in the DPP. Medical waste is a serious threat to public health. After the implementation of the project, a huge amount of medical waste such as, gauge/bandage, syringe, saline bag, papers, medicine packet, food waste, urine, placenta, ampoule, sanitary pad, cotton, etc. will be generated. Provision of treatment facility was not included in the project components. Moreover, hospital is a very crowded

²³ Project Completion Report, *Construction of Drains to Alleviate Water Logging Problem at Rajshahi City (2nd Phase)* (Rajshahi: Rajshahi City Corporation, 2008), p. 16.

²⁴ Working Paper on Environmental Study, *Structure Plan, Master Plan & Detailed Area Development Plan for Rajshahi Metropolitan City* (Rajshahi: Rajshahi Development Authority, 2003), Chapter 4, p. 12.

²⁵ Project Completion Report, *Construction of 50 Bed City Hospital at Rajshahi City Corporation* (Rajshahi: Rajshahi City Corporation, 1995), p. 4.

place. Problem of potable water supply and sanitation may be intensified. A huge public gathering with a temporary market place surrounding the hospital would take place which may generate more waste. So, these adverse environmental impacts were not foreseen and addressed at an early stage in project planning and enforcement.

Conclusion

Environmental compliance in the development projects is very much necessary to ensure sustainable development of a country. In accordance with the environmental legislation of Bangladesh, the executing agency must consider environmental issues in their development activities. Development projects have to be planned and implemented identifying the potential impacts on environment and natural resources. They have to avoid or take appropriate steps to mitigate or minimize the adverse impacts on environment. But it is found from the field survey that adequate assessment of adverse environmental impacts of the selected development projects is hardly done by RCC. RCC executives stated that under the existing procedure, there is a lack of mandatory provision for environmental assessment. The existing project appraisal formats (Project Proforma or PP and Project Concept Paper or PCP) of the Planning Commission include only a question asking for assessment of the environmental impacts of development projects. The PP, instead of environmental assessment, only contains a provision, "briefly describe the effect/impact and specific mitigation measures thereof if any on (i) other projects/existing installations (ii) environment like land, water, air, bio-diversity, etc. (iii) women and children (iv) employment, poverty alleviation, etc. (v) institutional, productivity (vi) regional disparity." The common practice is to provide only subjective judgments in reply. The PP and PCP do not require either the identification or the quantification of environmental costs and benefits. In case of almost all the RCC projects, it is stated in the PP/PCP without conducting any environmental assessment of potential impacts that there would be no adverse effect/impact of the proposed project on the environment; rather it would help improve the environment. So, in the current environmental assessment system, there are some inadequacies. The major inadequacies are in legislative control of the environmental assessment, procedural appropriateness of current environmental assessment system, institutional capacity and public participation. Though environmental legislations make environmental assessment mandatory for all development projects, there is no specific guideline for doing this in non-industrial projects at urban level. Currently, environmental assessment is done by the project sponsor and is sent to the DoE for environmental clearance by the sectoral line agencies of the government. In fact, the DoE is still following an adhoc based procedure for giving environmental clearance of urban non-industrial projects. So, necessary initiatives should be taken by the concerned public agencies for effective implementation of the environmental assessment policies in urban development projects through a coordinated effort among the responsible agencies.

ACID VICTIMS AND THE PROBLEMS OF IMPLEMENTING ACID ATTACK RELATED LAWS IN BANGLADESH

Anjelika Hasan*

Abstract: This paper is an attempt to discuss the laws promulgated to meet the demands that acid crimes be controlled and perpetrators receive swift punishment and the trade of acid and other corrosive substances be regulated by legal checks and balances to prevent their easy accessibility. This paper also discusses the socio-economic background of the acid victims, causes of acid throwing and the laws enacted for preventing acid attack. The main challenge of this paper is to identify the problems associated with the implementation of laws viz. the Penal Code 1860, the Women and Children Oppression (amendment) Act 2003, the Acid Control Act of 2002 and the Acid Crime Control Act of 2002 in a patriarchal society like Bangladesh.

The legal status of the Muslim women in Bangladesh is defined by the principles of *Sharia* through Muslim personal law along with the general law which is non-religious and secular in its character. The Muslim personal law covers the field of marriage, divorce, maintenance, guardianship of children and inheritance whereas the general law covers the rights under the Constitution, penal laws, the civil and criminal procedure codes, law of evidence etc. (Swanson, 2002). It is necessary to examine the legal status of the Muslim women in Bangladesh in the context of these two sets of law as in both cases women are supposedly fortified with theoretical legal rights, but there is a gulf of difference between theory and its actual application (ibid). Most important issue is that, it may be seen that some of these laws though excellent in theory prove largely elusive in practice. The main hurdle that lies in the way of the practical application of the legal rights of women in Bangladesh is obviously the inherent contradiction of attitude that permeates the patriarchal society considerably supported by religious beliefs and value system (Rout and Panda, 2008).

Bangladesh government established the Ministry for Women and Children Affairs in 1978, an administrative organization that is solely dedicated to women's issues. Through this organization and numerous other agencies, the health, literacy, and status of women have already improved. Several international NGOs are providing financial support to women to allow them to start their own businesses and earn income on their own. The status of women still has a long way to go, but women have made several gains in achieving more legal rights in terms of marriage and land rights. The women are utilizing the legal system

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for protection and also asserting their rights. Technically, the Constitution of Bangladesh states that all citizens have equal rights regardless of sex, race, class, caste and religious identity. However, women have not yet been able to enjoy complete equality in their different phases of life cycle and that may fuel the different types of violence including acid throwing. The main objective of this paper is to find out the existing laws against acid attack and identify the problems associated with the implementation of these laws viz. the Penal Code 1860, the Women and Children Oppression (amendment) Act 2003, the Acid Control Act of 2002 and the Acid Crime Control Act of 2002 to prevent acid attack as well as to provide justice to the acid victims in a patriarchal society like Bangladesh.

Conceptual Framework

Acid attack is a form of violent assault which destroys the life of the victims (Karmakar, 2003). It is defined as the act of throwing acid onto the body of a targeted person with the intention of injuring or disfiguring out of jealousy or revenge. Perpetrators of these attacks throw acid on the victims, usually at their faces which burn them and damage their skin tissue, often exposing and sometimes dissolving the bones (Achebe and Akpuaka, 1998). The acid victim is a person either male or female who is victimized by acid attack by the perpetrator.

The laws are enacted in different times in order to prevent acid violence and at the same time to provide justice to the acid victims. General definition of justice is hard to arrive at and even harder to implement. In essence, justice is concerned with equal rights and opportunities, not just in the courts, but in all aspects of society. The concept of justice is confined in this research to provide effective legal protection from violence through acid attack against women, with the implementation of laws viz. the Penal Code 1860, the Women and Children Oppression (amendment) Act 2003, the Acid Control Act of 2002 and the Acid Crime Control Act of 2002.

Research Methodology

The data used in this paper is based on the findings of the research project entitled "Acid Throwing against Women and the Problems of Implementation of Laws against the Perpetrators in Bangladesh". The data was collected in 2011-2012 from different selected areas of Bangladesh. Several methods and techniques have been applied to conduct this research project viz. selection of the areas to collect data from the acid victims, selection of the population of the study i.e. subject of the study, and methods and techniques used for the collection of primary data. Survey, observation, case study, Focus Group Discussion (FGD) and the use of key informant methods were applied to collect primary data. In addition, secondary data was collected from the relevant books, journals, research report and so on. Emphasis has been given on qualitative data than on quantitative for this research paper. The quantitative data was also used to supplement the qualitative analysis.

The Acid Victims

Information was collected from 104 acid victims in the area under research in order to get a clear idea about their age, marital status and level of education. This section deals with the socio-economic background of the acid victims in terms of age, marital status,

education including the different types of family in which the acid victims belong and their annual income.

Age and Marital Status

Age structure means in what ages the girls or women were attacked by throwing acid by the perpetrators. In table-1, lower limit of age was seen 14 years just at the beginning stage of puberty and upper limit was more than 30 years of age. On the other hand, marital status means the position of acid victims in relation to their marriage. Marital status is classified into unmarried, married, separated, deserted, divorced and widowed.

Table 1: Age Structure and Marital Status of the Acid Victims

Age	Marital Status						Total
	Unmarried	Married	Separated	Deserted	Divorced	Widowed	
14-18	14 (13.4)	2 (2.0)					16 (15.4)
18-22	10 (9.6)	4 (3.9)					14 (13.5)
22-26	6 (5.8)	2 (2.0)		2 (2.0)			10 (9.8)
26-30	2 (2.0)	4 (3.9)			8 (7.7)		14 (13.5)
30+	10 (9.6)	24 (23.0)	4 (3.9)	4 (3.9)	4 (3.9)	4 (3.9)	50 (48.2)
Total	42 (40.4)	36 (34.8)	4 (3.8)	6 (5.7)	12 (11.5)	4 (3.8)	104 (100.0)

Note: 1. Separated means couple may live separately or may live in the same house but sleep separately. 2. Deserted means husband fled away without any information.

It is evident from table-1 that about 15.4 percent girls were victim of acid attack when their age was 14-18 years. Similarly, about 13.5 percent victims were 18-22 years old and only 9.8 percent acid victims were 22-26 years old. It is found in table-1 that about 13.5 percent acid victims were 26-30 years old. It is interesting to note that about 40.4 percent of acid victims were found unmarried and most of them were school students. On the other hand, about 59.6 percent of acid victims were married. Among the married victims, about 34.8 were involved in their conjugal life. About 3.8 percent acid attacked women were living separately from their husbands. It has been observed that the two types of separation were found among the spouses; one is physical separation which means they did divorce and they are living separately and the second one is mental separation which indicates that they were living in the same house but they were sleeping separately for the sake of the so called social position and prestige in the society. About 5.7 percent acid victims were found deserted and as a result the wives were not able to find out the whereabouts of their husbands. About 11.5 percent were divorcees because they cut their marital tie with their husbands. Only 3.8 percent acid victims were widowed and their age was around 30 years.

Level of Education

Level of education means whether the acid victims were educated or they do not have any education. The level of education also indicates the grades or class of formal education of the victims. Table-2 shows the level of education of the acid victims in relation to their age.

Table 2: Level of Education of the Acid Victims in Relation to their age

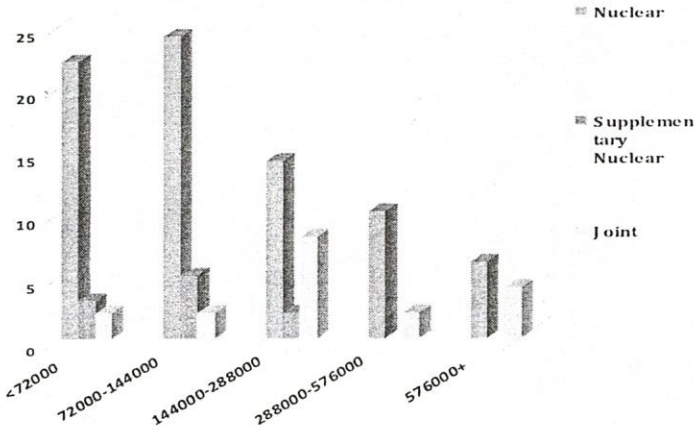
Education Age	Level of Education							Total
	Illiterate	Primary	Secondary	SSC	HSC	Graduate	Masters	
14-18	2 (2.0)	4 (3.8)	8 (7.7)	2 (2.0)				16 (15.5)
18-22	2 (2.0)	2 (2.0)	6 (5.8)	8 (7.7)	8 (7.7)			26 (25.2)
22-26		4 (3.8)	2 (2.0)	7 (6.7)	3 (2.9)	4 (3.8)		20 (19.2)
26-30	2 (2.0)	2 (2.0)	4 (3.8)	4 (3.8)	2 (2.0)	3 (2.9)	2 (2.0)	19 (18.5)
30+	3 (2.9)	4 (3.8)	8 (7.7)	2 (2.0)	2 (2.0)	1 (1.0)	3 (2.9)	23 (22.3)
Total	9 (8.9)	16 (15.4)	28 (27.0)	23 (22.2)	15 (14.6)	8 (7.7)	5 (4.9)	104 (100.0)

It is found in table-2 that about 8.9 percent acid victims were illiterate. They do not have any formal even informal education at the institutional level. It has been reported that some of them were fond of education but they could not reach their goal due to acute poverty. Moreover, gender biased attitude was observed among the parents in providing education to the girls. They also showed their profit motive attitude in relation to their daughters' education. It has been reported by some of the parents that after marriage the girls will go to their in-laws residence, so it is useless to provide financial support for education of the girls.

Types of Family and Income

This section deals with the annual income of the different types of families of the acid victims and their classification based on the income and social status. The family income defined here is the total collective income of the individual family. The sources of income of each family may be different or multiple which are not discussed here. The annual income is categorized into five slabs as shown in the table-5. These five slabs are also identified in different socio-economic classes viz. lower class whose annual income was <Taka 72000, the lower middle class whose annual income was Taka 72000-144000, the middle class with the income slab of Taka 144000-288000. On the other hand, the families with annual income of Taka 288000-576000 were considered upper middle class. Similarly, the families with annual income of Taka 576000 were identified as upper class. A table is given below to get the clear idea about the annual income of the different types of families and their socio-economic position in the society.

Annual income of the Families of the Acid Victims in Relation to Family Types



It is evident in this graph that 26 percent families were found lower income group. Among them 21.2 percent were nuclear families, and 2.9 percent and 1.9 percent were supplementary nuclear and joint families respectively. On the other hand, about 29.7 percent families were lower middle class. Among them 23 percent, 4.8 percent and 1.9 percent belonged to the nuclear, supplementary nuclear and joint families respectively. About 23.1 percent families were middle class and their status was classified according to family types. For example, 13.5 percent families were nuclear and 1.9 percent and 7.7 percent families were supplementary and joint in nature. It was found that about 11.6 percent families were upper middle class. Similarly, 9.7 percent families were upper class. Among them 5.8 percent were nuclear and 3.9 percent were joint families.

Causes of Acid Throwing

There are many causes for acid throwing by the perpetrators. These are socio-economic, political, cultural, ethno-religious and psychological (Sarker2010). In addition, mobile telephone is one of the key causes of acid throwing against the targeted women and it has been discussed in details in the section of failure in love. Moreover, the age of science and technology is greatly responsible for illegal act and anti social activities by the perpetrators in Bangladesh. The graph below shows the different specific causes of acid throwing against women in the area under study.

Cause of Acid Violence against Women and the Victim's Relationship with the Perpetrators

Causes of Acid Throwing	Perpetrators							Total
	Ex-Boy Friend	Cousin (FaBrSo)	Neighbors	Ex-Husband	Step Father	Son of Politicians	Others	
Refusal of Love		2 (1.95)	10 (9.60)			6 (5.80)	6 (5.80)	24 (23.10)
Dispute (Land, Politics etc)		4 (3.85)	14 (13.50)			2 (1.95)	2 (1.95)	22 (21.25)
Refusal of Marriage Proposal	4 (3.85)	2 (1.95)	4 (3.85)				2 (1.95)	12 (11.60)
Extra Marital Sexual Relation	2 (1.95)		4 (3.85)	4 (3.85)				12 (9.60)
Failure of Giving Dowry	2 (1.95)			6 (5.80)			2 (1.95)	10 (9.70)
Disagree with Illegal sexual relation	4 (3.85)		4 (3.85)		2 (1.95)	4 (3.85)		14 (13.50)
Others			4 (3.85)	2 (1.95)			6 (5.80)	12 (11.60)
Total	12 (11.60)	8 (7.75)	40 (38.50)	12 (11.60)	2 (1.95)	12 (11.60)	18 (17.45)	104 (100.00)

It is evident from the above graph that 3.85 women were attacked by acid by their ex-boyfriends due to refusal of proposal of marriage. It has been reported that in many cases the women were not willing to get married with the boyfriend, but the boyfriend seriously wanted to have his girlfriend as his life partner. This created conflict and as a result it turned into violence like acid throwing on the girlfriend by the boyfriend to take revenge. On the other hand, about 1.95 percent reported that they were victims of acid throwing because they denied the proposal of extra-marital sexual relations.

About 9.6 percent acid victims reported that the acid was thrown upon them by the neighbors because of refusing love proposal. On the other hand, 5.8 percent perpetrators were the relatives of the persons involved in power politics. About 5.8 percent perpetrators were un-known to the victims. Similarly, 3.9 percent, 1.9 percent, 3.9 percent and 1.9 percent perpetrators were identified as cousins, neighbors, relatives of political persons and un-known persons respectively, and they were involved in acid throwing because of disputes of land, politics and so on.

About 3.9 percent ex-boyfriends, 1.9 percent cousins, 3.9 percent neighbors, and 1.9 percent un-known persons threw acid because of refusal of marriage proposal. On the other hand, 9.6 percent acid victims reported that they were attacked with acid for not responding to proposal for extra-marital sex relation. Among them about 1.9 percent were ex-boyfriends, 3.9 percent neighbors, and 3.9 percent ex-husbands. About 9.7 percent acid victims reported that they were attacked with acid due to failure of commitment to pay off dowry. About 13.5 percent fall victims of acid victims because of disagreement in illegal sexual relation before their marriage. Among the perpetrators, 3.9 percent were ex-

boyfriends, 3.9 percent neighbors, 1.5 percent step-fathers and 3.9 percent were the relatives of the politicians. About 11.6 percent victims were able to find out the specific causes behind acid throwing. It is interesting to note that about 7.8 percent perpetrators were cousins, mostly Father's Brother's Sons (FaBrSo). On the other hand, 9.9 percent were ex-boyfriends of the victims. About 38.5 percent perpetrators were neighbors and 13.6 percent were ex-husbands, 1.9 percent step-fathers, 11.6 percent relatives of the politicians, and 17.5 percent were unknown to the victims.

Mariom is one of the selected cases of acid victims. Information is collected from her using the case study method from the selected area of study. To quote Mariom Begum:

Acid was thrown upon my face by my ex-husband because of failure to pay off the commitment of dowry at the time of our wedding. The commitment was made by my parents to pay Taka two lacs in cash along with three pieces of gold ornaments and one television. At the time of wedding my parents provided Taka one lac and fifty thousand, three pieces of ornaments and a television. Taka fifty thousand was due because of financial constraint but my parents promised that after six months of wedding this amount will be given to my husband. It should be noted that my father was a marginal farmer and he had to maintain all the family expenditure.



My brother and sister were school students and the grand mother was sick. Land was the only source of income of father. Unfortunately, my father was not able to pay Taka fifty thousand to my husband in scheduled time because of failure of seasonal crops due to over flood. My father also requested my husband for extension of another six months to pay the committed money. Under the circumstances, my husband became dissatisfied upon my father and told him to get back his daughter. A serious crisis started between two families. Finally I could not stay at my in-laws' house and returned to my parents' house. Sometimes I thought that I was a burden to my parents and as a result I wanted to do something for my parents. I studied only up to grade eight so I did not have any scope to get a job.

I decided to get training on how to raise poultry and finally I received training by the Youth Development Organization. I started my small poultry firm at the household level with the help of my father. After ten months I received the output of my poultry firm. I was enthusiastic and I always thought how it can be more lucrative. I was taking care of my birds with the advice of the experts of the Animal Husbandry Department. After one and a half year, when I was getting good result of my small poultry firm, my parents proposed for second marriage with my cousin. I refused and told them I decided to live alone without any help from anyone. By this time my husband wanted to get me back. I refused to return to his family. When he failed to get me, he threatened me. I did not care for that and as a result he threw acid upon my face at night when I went to toilet out of our residence.

Laws Enacted for Acid Attack

In Bangladesh in 1995 when the government initially thought acid attacks to be a gender-specific crime, it passed the Oppression of Women and Children (Special Provisions) Act. The Prevention of Oppression against Women and Children Act, 2000 also dealt with acid

attacks on women and children. However, the rise in trends of acid violence against men that ensued in the late 1990s made it necessary for the government of Bangladesh to pass a law that dealt with the crime against both women and men in specific terms. Hence, in 2002, two new laws, the Acid Crime Control Act, 2002 and Acid Control Act, 2002 were enacted to address the growing problem. Bangladesh has set an example for other countries as to how to address the growing problem of acid attacks by enacting these two laws in 2002 to deal with Acid throwing crime against both women and men.

The president of Bangladesh approved the Acid Control Act of 2002 and the Acid Crime Control Act of 2002 on March 17 of that year. The laws were promulgated to meet the demands that acid crimes must be controlled and perpetrators must receive swift punishment and that the trade in acid and other corrosive substances should be regulated by legal checks and balances to prevent easy accessibility to acid.

A lot of thought was given to the drafting of these laws, especially in the area of compensation to the victim, carelessness of the investigation officer, bailability, the magistrate's power to interview at any location, medical examinations and protective custody, the setting up of an acid crime control council at the national level and acid crime control committees at the district level, establishing rehabilitation centers, licenses for the trade in acid, etc.

According to the Acid Crime Control Act, acid crimes are rigorously controlled by mandating stringent punishment ranging from 3 to 15 years and in some cases life imprisonment and even capital punishment. The variations of punishment depend on the gravity of the crime. For example, if the victim dies due to the crime or totally or partially loses their sight or hearing or both or "suffers disfigurement or deformation of face, chest or reproductive organs", the punishment is the death penalty or life imprisonment (section 4 and section 5). Interestingly enough, the act provides that if the Acid Crime Control Tribunal feels that the investigating officer lapses in his duty in order to "save someone from the liability of the crime and did not collect or examine usable evidence" or avoided an important witness, etc., the former can report to the superior of the investigating officer the latter's negligence and may also take legal action against him (section 13).

The Acid Control Act has been introduced to control the "import, production, transportation, hoarding, sale and use of acid and to provide treatment for acid victims, rehabilitate them and provide legal assistance." The National Acid Control Council has been established under this Act with the minister for home affairs as its chairperson. Under this council, committees at the district level have been formed, but only in six or seven districts to date. Members of the council include the minister for women and children affairs, secretaries from the Ministries of Commerce, Industry, Home Affairs, Health and Women and Children's Affairs and representatives from civil society, as specifically mentioned in the law. This allows for a broad spectrum of representation. More importantly, according to this law, businesses dealing with acid need a license to do so. Further the government has created a fund to provide treatment to victims of this violence and to rehabilitate them as well as to create public awareness about the negative effects of the misuse of acid.

Problems of Implementation of Laws

Despite the laws relating to acid crime enacted in different times in order to prevent as well to provide justice to the victims, why the annual figures on reported incidents of acid

violence is not reducing? Why is it still so easy to procure acid and sell it openly without a license? According to studies carried out by the Acid Survivors Foundation (ASF) along with other organizations and individual researchers, there are several reasons for this phenomenon and for those reasons the law is not being implemented properly.

First, a separate, modern investigation department with trained investigators in the police force has not yet been created, and over burdened police is unable to carry out their investigation duties properly. Second, these other result in hurriedly written reports and an inefficient investigation. Many non-governmental organizations (NGOs) have called for the formation of a separate department, but these pleas fall on seemingly deaf ears. Third, there is a lack of follow-up efforts as to whether businesses are procuring licenses for the sale and trade of acid. Fourth, doctors are unable to provide proper treatment to the acid burns due to a lack of training, medical certificates are not clear and sometimes vital information is not noted down. Fifth, many doctors are reluctant to go to court to give evidence because of lengthy procedure to solve the issue. A lack of sufficient number of judges and judicial officers in the lower courts causes delays in the hearings as well, and consequently, cases are either not heard on time or remain pending.

Conclusion and Policy Implications

Acid attacks are extremely violent crimes by which the perpetrators of the crime seek to inflict severe physical and mental suffering on the victims. In Bangladesh, this form of violence is often inflicted on targeted women. The most common reasons for such attacks are domestic violence, refusal of marriage proposal, denial of sexual advance etc. The acid is usually thrown at the victim's face with the intent of disfiguring the woman in order to take revenge for her refusing the advances of the perpetrator. Women who have survived acid attacks have great difficulty in finding work and, if unmarried, have very little chance of ever getting married and they suffer from mental agony (Bhatt 2008). Most of the victims do not get proper medical treatment and plastic surgery due to financial constraint (Bangladesh National Women Lawyers Association, 2001:47) and lack of knowledge. Many laws are enacted to prevent acid throwing against women and also for the punishment of the perpetrators. Unfortunately, these Acts are not properly executed to provide justice. The following policies may be taken to prevent acid attacks as well as to improve quality of life of the acid victims.

1. Mass Awareness

There must be a widespread awareness campaign in educational institutions, media and for police personnel and primary health centers regarding the first aid to be administered in the case of acid attacks. Proper first aid would prevent further damage to the body parts.

2. Adequate Medical Services

Medical aid should be provided as early as possible. Paramedics and other medical professionals should be trained in treating acid burn cases (Jutla and Heimbach, 2008). Moreover, medical care facilities should be increased in different medical colleges and health care institutions.

3. Trained Police

The police should take the initiative to file acid violence cases against the accused. They should be encouraged to file criminal cases. Training facilities need to be provided for the

police. Moreover, the number of police should be increased in order to provide effective services to the acid victims.

4. Rehabilitation Facilities

The governments should pay compensation to the acid victims as a rehabilitative measure as it would be a life-long trauma for the victims. The Government should also bear the expenses for undergoing treatment because many guardians are not in a position to bear the expenditure for treatment.

5. Initiative for Preventing Acid Violence

Prevention of violence necessitates that justice is administered in incidents of violence against women and that the cases are not unduly delayed. This also requires sensitization of the legal system and requisite monitoring.

6. Community Involvement

Awareness among the young generation not to be involved in acid crimes at the community level should be initiated involving the civil society in order to prevent such crimes as well as to provide justice to the victims.

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ENVIRONMENTAL GOVERNANCE: POLICIES AND PRACTICES AT LOCAL GOVERNMENT LEVEL IN BANGLADESH

Golam Rabbani*

Abstract: Environmental degradation and climate change are burning issues in development discourse in Bangladesh. Considering the need and magnitude of problems local government institutes (LGIs) can take necessary initiatives in avoiding or mitigating negative environmental changes or can actively contribute towards positive environmental outcomes. In this regard, the discussion in this paper would focus on two main themes: policy options in governing environmental issues and compliance of these policies in planning, regulatory and management functions of local government. This study reveals that to govern the environmental management at UP level it has a sound legal base or policy framework. However, there is a gap in translating these policies in reality.

Introduction

The role of local government in environment management, utilization of natural resources and addressing the challenges of climate change is a growing concern in the development arena.^{1, 2} United Nations supports through the Poverty Environment Initiative (PEI), Global Environment Facility (GEF) and other programmes have highlighted the importance of local governments to this end.³ At the present time, the inter-relations among local government, environmental management, governance of natural resources and adaptation with climate are important issues of investigation.⁴ It is well recognized that local government institutions stay very close to local people, and considering the need and magnitude of problems local government institutes (LGIs) can take necessary initiatives in avoiding or mitigating negative environmental changes or can actively contribute towards positive environmental outcomes. Pro-poor policy and community-driven initiatives are very essential for involving people in environmental and natural resource management or to

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¹ ALGA (Australian Local Government Association) 1996. *Managing the Environment: a practical guide for local government to environmental management systems and the ISO 14001* (Canberra: ALGA, 1996).

² Su Wild River, *The Role of Local Government in Environmental and Heritage Management*, (Canberra: Environmental and Heritage Management, 1996).

³ UNDP-UNEP. *Mainstreaming Poverty-Environment Linkages into Development Planning: A Handbook for Practitioners*, (Nairobi : United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP), 2009).

⁴ Gagnon-Lebrun Frédéric and Shardul Agrawala. *Progress on Adaptation to Climate Change in Developed Countries: An Analysis of Broad Trends*, ENV/EPOC/GSP (2006)1/FINAL, (Paris: OECD, 2006).

help them to mitigate climate change.⁵ In this regard, a good institutional framework is very essential for effective policymaking and its implementation. LGIs are such type of organizations that can take these initiatives without difficulty.

This paper aims to shed some light on the issues of environmental governance in the context of Bangladesh. The discussion would focus on two main themes: (1) policy options in governing environmental issues and (2) compliance of these policies in planning, environmental regulations and management functions. In exploring these dimensions, this study also investigated the broad jurisdictional and institutional framework and ways, in which local governments interact with or are involved with community-based natural resources and environmental management. In Bangladesh, Union Parishad (UP) is the lowest tier of rural local government system which has historical root to deal with social and natural environments. This study was focused on environmental governance issues of UP in Bangladesh.

Environmental Problem and Union Parishad

Bangladesh is widely recognized as one of the most climate vulnerable countries in the world. It experiences frequent natural disasters, which cause loss of life, damage of infrastructure and economic assets, and has adverse impacts on lives and livelihoods, especially of poor people. UNDP has identified Bangladesh as the most vulnerable country in the world to tropical cyclones and the sixth most vulnerable country to floods.⁶ In 2007, two successive damaging floods inundated the country in the same season. During high floods, riverbank erosions are common. It can result in the loss of thousands of hectares of agricultural land and villages and displaces thousands of people. A severe tropical cyclone hits Bangladesh, on an average, every 3 years. Between 2007 and 2009 cyclones *Sidr*⁷ and *Aila*⁸ devastated the southern region of the country. Droughts in Bangladesh are seasonal and can destroy crops, causing hardship to poor agricultural laborers and others who cannot find work. In the seasons, *monga* (unemployment leading to seasonal hunger) is often a problem, especially in the months leading up to the November-December rice harvest. If the crops are totally damaged because of drought, the situation for poor people can become critical. Droughts most commonly affect the north-western region, which generally has lower rainfall than the rest of the country.⁹

Furthermore, there are other environmental problems in the form of air pollution, water pollution and ground water contamination with arsenic, land degradation and loss of social quality, loss of wetland, degradation of forests and loss of forest lands and loss of biodiversity. The major causes of environmental degradation in Bangladesh are lack of proper monitoring, lack of accountability, higher level of corruption, absence of people's participation, lack of proper initiatives from Local Government Institutes (LGIs) and NGOs, inadequate legal framework, poor institutional arrangement, absence of incentives for environmental conservation and low priority attached by the Government to improve the environmental governance situation. Most of these causes are well connected to

⁵ Melissa Leach, Robin Mearns and Ian Scoones. Environmental Entitlements: Dynamics and Institutions in Community-Based Natural Resource Management, *World Development*, Vol. 27, No. 2 (1999) : 225-247.

⁶ UNDP, *A Global Report: Reducing Disaster Risk: A Challenge for Development*, United Nations Development Programme (New York: Bureau for Crisis Prevention and Recovery, 2004).

⁷ Cyclone *Sidr* was well known as the strongest named cyclone in the Bay of Bengal which brought the worst natural disasters in Bangladesh on November 15, 2007.

⁸ A devastating tropical cyclone of Bangladesh caused extensive damage in the coastal belt of the country on 27 May 2009.

⁹ MoEF (Ministry of Environment and Forest), *Bangladesh Climate Change Strategy and Action Plan 2008*. Dhaka : Ministry of Environment and Forests, Government of the People's Republic of Bangladesh, Dhaka, Bangladesh, 2008): xvi, 68.

environmental governance. However, the usual practices in tackling environmental pollution and natural resource management are not adequate.¹⁰ Policy actors come forward with policy suggestions and they emphasize that there is no alternative to strengthening local government bodies for proper implementation of plans in managing environmental degradation.¹¹

Degraded environment means fewer resources for the poorest and future generations since most of the citizens of the country are living in rural areas who are mostly dependent on nature for their livelihood. In this connection, 'economic growth and sustainable development' is the key concern in poverty reduction and future development of Bangladesh. Since the country is passing through multi-dimensional environment and natural resource related problems, the government has to handle those problems with sound environmental governance.¹²

Thus, development efforts in Bangladesh must be considered within the context of several fundamental realities. First, a large majority of the country's population lives in rural areas. Second, people in these rural areas overwhelmingly depend on agriculture and other natural resources for their livelihood and survival. Finally, the ways in which these resources are used are fundamentally governance issues determined by the functioning of the key management institutions of laws and policies. Local Government Institutions (LGIs), especially Union Parishad, the lowest local government body of Bangladesh, is situated very close to the rural people and nature. UP can play a significant role in managing local resources effectively and delivering services to the poor. As grassroots level institution, UP can also create a bridge among the central government, NGO/CSO and the community.^{13 14}

Materials and Methods

This paper is analytical in nature based on "case study". A mixed method approach (both qualitative and quantitative data) has been used in this study with focus on case study method. Godagari Union Parishad, Godagari Upazila, Rajshahi District was taken as a case. In this study, 100 respondents who were the common people and do not hold official positions of the UP were interviewed using structured pre-formulated questionnaire. One UP chairman, two female UP members and two Project Implementation Committee (PIC) members were also interviewed as key informants. Also, a Focus Group Discussion (FGD) with seven male UP members was organized. For in-depth analysis and making the information more reliable and valid, relevant documents were meticulously reviewed by the investigator. The team collected primary data in October 2010. Also secondary literature, which includes relevant publications, journals, books, research reports, and news papers were reviewed.

Governance and Environmental Governance: A Framework for Analysis

The genesis of the concept of governance is not new though it is very hard to find out its historical root. Discussion on the issues of good governance is found in the 'The Politics' of Aristotle. Many writers argue that the idea or concept of governance has been used at least

¹⁰ ADB (Asian Development Bank), *Country Environmental Analysis Bangladesh*, (Dhaka : Asian Development Bank, Bangladesh, 2004).

¹¹ *The Daily Star*, 20 August, 2010 (available at <http://archive.thedailystar.net/newDesign/newsdetails.php?nid=151454>).

¹² IUCN, *Governance of Natural Resources Management in Northern Bangladesh: A Study on Rajshahi District*, (Dhaka: IUCN, Bangladesh, 2010).

¹³ M Aminul Islam. Linking environment with development, *The Daily Star*, April 12, 2008.

¹⁴ World Bank, *Bangladesh Country Environmental Analysis Bangladesh Development Series*, Paper No: 12, (Dhaka : World Bank Country Office, Bangladesh, 2006).

since the fourteenth century. Governance is such a concept which expresses a range of meanings related to exercise of power, and it is also synonymous to government. Though governance is an old concept, the political and economic changes that marked in 1990s act as influential factors to make the concept prominent in development discourse. Governance is an elusive concept; it does not have a clear-cut and universal definition.^{15, 16}

According to the World Bank, governance comprises three things: (1) the type of the political regime; (2) the procedure of managing economic and social resources; and (3) the arrangement to formulate and implement policies and discharge governmental functions.¹⁷ Also, researchers identified governance indicators with reference to three fundamental aspects: (1) rule of law, (2) government effectiveness, and (3) graft.¹⁸

When concept of "governance" is placed within the environmental context, it generally refers to the relations and interplays among government and non-governmental entities, processes and normative frameworks, where powers and functions directly or indirectly influence the use, management and control of the environment.¹⁹ Lemos and Agrawal²⁰ (2006:98) mentioned, "Environmental governance refers to the set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes". In other words, environmental governance deals with legal and policy decisions to manage environmental issues, compliance of those policies in development management and participation of common people who are directly affected by the outcome of such decisions.²¹

Literature review on environmental governance shows four domains of scholarship such as, globalization, decentralization, market and individual incentives-based governance, and cross-scale governance. Four blocks of scholarship put emphasis on the issues of community based environmental governance but "Decentralized Environmental Governance" as a block of recent scholarship gives extra concentration on environmental governance through local institutions. Evidence on common property, the capacity of communities and other small-scale social formations to manage resources provide a new path toward co-management, community-based natural resource management, and environmental policy decentralizations. If discussions of environmental governance concentrate on "state" and "free market institutions" ignoring the community people the discussion will not get its proper form. It is evident that the stakeholders of a specific community who are the users of resources are often able to self-organize and govern themselves. Advocates of co-management and "capacities of communities" have developed a theoretical base which is popular as decentralized environmental governance, and the foundation of this block of theories is based on the voice and participation of common people.²²

The above discussion show that environmental governance refers to the process and influence of policy making and implantation. This study is focused on the role of UP in managing the environmental matters. On the basis of the theoretical note, the paper

¹⁵ I.P. Khosla, "Governance and Difference", *South Asian Survey*, 7 (2000):187-208.

¹⁶ M S Aminuzzaman. *Governance and Development: Bangladesh and Regional Experiences*, (Dhaka : Shrabon Prokashani, 2006).

¹⁷ Cited in Khosla, op.cit. :188.

¹⁸ Daniel Kaufmann, Aart Kraay, and Massimo Mastruzzi. *Governance Matters IV: Governance Indicators for 1996-2004*, (Washington, DC: World Bank, 2005).

¹⁹ John Graham, Bruce Amos and Tim Plumptre, *Governance Principles for Protected Areas in the 21st Century*, (Ottawa : Institute on Governance, 2003).

²⁰ Carmen Lemos Maria and Arun Agrawal. *Environmental Governance, Annual Review of Environmental and Resources*, 31(2006) : 297-325.

²¹ Dejo Olowu "Environmental Governance Challenges in Kiribati: An Agenda for Legal and Policy Responses", *Law, Environment and Development Journal*, 3/3, (2007) : 261-269.

²² Lemos and Agrawal, op.cit.

throws some light on environmental policy making of UPs, more specifically consideration of the issues of environment in decision making process since the institution does not have the legal jurisdiction to formulate policies, and compliance of the policies²³ in environmental management. To depict the situation of environmental governance of UPs in Bangladesh consideration of environmental issues in Planning, Project Implementation, Monthly Meetings and Standing Committees have been considered because within the UP level governance these are the platforms where decisions are taken.

Local Governance in Bangladesh

Establishment of LGIs in Bangladesh is embedded in the Constitution. According to the Article 59(1) of the Constitution of the People's Republic of Bangladesh, "Local Government in every administrative unit of the Republic shall be entrusted to bodies, composed of persons elected in accordance with law".²⁴ According to article 59 (2) of the Constitution local government institutions will perform the following functions-"

- a) Administration and the work of public officers,
- b) The maintenance of public order, and
- c) The preparation and implementation of plans relating to police services and economic development"

At present, there are three tiers of local government in Bangladesh - Union Parishad, Upazilla Parishad and the Zilla Parishad. Only the lowest tier, the Union Parishad, is functional from the British period though this tier has undergone experimentations and modifications over the decades. Upazila was short-termed (1985-1991)²⁵ and again it is reintroduced by Awami League-led government after the general election in 2009. Zilla Parishad is managed by bureaucrats and nominated political leaders. During the last four decades after independence, several steps have been taken to strengthen the Union Parishad, which include direct election of women as UP representatives,²⁶ fiscal decentralization,²⁷ several options for people's participation for ensuring transparency and accountability.²⁸ Furthermore, recently different national and international actors have been working to empower the local government leaders for ensuring sustainable development at local level in Bangladesh.²⁹

Legal or Policy Framework for Environmental Governance at Union Parishad

In the discipline of public administration or governance, it is well recognized that sound policy and effective governance are closely related. Compliances with environment are laid down by a set of legal and regulatory frameworks in Bangladesh. In this connection, this study tried to explore the policy options for governing the environmental issues in local government, particularly at the UP level.

²³ Policy guidelines given by the central government and donors.

²⁴ GOB (Government of Bangladesh), *The Constitution of the Peoples' Republic of Bangladesh* (October, 1991), (Dhaka: Ministry of Law, Justice and Parliamentary Affairs, September, 1993): 43.

²⁵ A.E. Sarker, "The Illusion of Decentralization: Evidence from Bangladesh", *The International Journal of Public Sector Management*, Vol. 16, no. 7 (2003) : 523-540.

²⁶ Pranab Kumar Panday. *Women's Political Participation in Bangladesh: Institutional Reforms, Actors and Outcomes* (PhD Thesis, City University of Hong Kong, 2008).

²⁷ A. T Rashid, 'Fiscal decentralisation through UPs. *The Financial Express*, May 6, 2008. Available at, <http://www.thefinancialexpress-bd.com/2008/05/06/32634.html>.

²⁸ Local Government (Union Parishad) Act 2009.

²⁹ Ahmad, October 2010. "Empowering Local Leaders for Sustainable Development in Bangladesh", *World Bank Blogs*, <http://blogs.worldbank.org/endpovertyinsouthasia/empowering-local-leaders-sustainable-development-bangladesh>, Accessed on, 01.10.2010.

National and International Policy Framework

Bangladesh along with the international environmental communities has showed grave concern to deal with environmental issues. This country has Signed/Ratified or accepted at least 30 Environment Related International Conventions, Protocols, Treaties, etc. Apart from the international framework it has a large list of environmental laws and policies. Legal framework of environmental governance includes more than 140 environmental laws and policies for Bangladesh.³⁰

The Union Parishad Act/ Ordinance and Environmental Governance

The wave of sustainable development has influenced recent Local Government (Union Parishad) Act 2009 and it incorporated the following environmental governance related clauses:

Schedule -2: According to schedule-2 of the Act, the major responsibilities of Union Parishad as regards the environmental governance are as follows:

- Taking necessary initiatives regarding conservation and development of environment.
- Protection and conservation of public places, parks and playgrounds.
- Taking initiatives for tree plantation and conservation.
- Management and preservation of lakes, ponds and other sources of water under government ownership.
- Taking initiatives for the development of fisheries, agriculture and livestock.

Section 7: As per the provisions of section 7, one of the major responsibilities of the ward committee is to prevent environmental pollution and ensure environmental conservation.

Section 45: According to section-45, there are provisions for formation of 13 standing committees in each Union Parishad of which two standing committees are directly related to environmental governance. UP is supposed to formulate "Environmental Conservation, Improvement and Tree Plantation Committee" for the following activities:

- Publicity for plantation of more trees
- Undertaking tree plantation programmes on the roadside in the UP areas
- Assisting any organization who are interested in tree plantation
- Taking necessary steps to nurture the planted trees
- Taking necessary steps to make the local people aware of the importance of conservation of the environment and what they should do to avoid damaging the environment³¹

According to Section 5. A (3) of Social Forestry (Amended) Rules 2010, Forest Officer and UP representatives (Female/Male) will prepare the list of beneficiary of social forestry [GOB, 2010].³² Also, the Environment Conservation Act, 1995 (ECA 1995) and the Environment Conservation Rules (under the ECA 1995), 1997(ECR 1997) describe the UP's role and responsibility in the management of environmental issues in local area.³³

However, there are many other laws that are multi-sectoral and are only partially linked to governance of environment. The Local Government Division (LGD), GOB has formulated a guideline, entitled, "Environmental Management Framework for Bangladesh Local Governance Support Project (LGSP)" and mentioned that UPs have to follow the following

³⁰ *The Daily Star* (A widely circulated national English daily in Bangladesh), August 4, 2010.

³¹ The Local Government (Union Parishad) Act, 2009.

³² GOB (Government of Bangladesh), *Social Forestry (Amended) Rules 2010*, (Dhaka : Ministry of Law and Parliamentary Affairs, Government of Bangladesh, 2010).

³³ LGD (Local Government Division), *Environmental Management Framework for Bangladesh Local Governance Support Project (LGSP)* (Dhaka : The Local Government Division (LGD), MOLGRDC Government of Peoples Republic of Bangladesh, 2006).

environment related rules and laws in planning and implementation of subproject under LGSP Project:

Table 1: Laws and Regulations that have to be followed by the UPs³⁴

Laws/Regulations	Regulated/Enforced Items
Water Supply and Sanitation Act, 1996	Management of water supply and sanitation in rural areas; Control of Environmental sanitation in rural areas
Brick Burning Control Act, 1989 (Amended 1992)	Promulgation of standards for air quality
The Protection and Conservation of Fish Act, 1950	Declaration of Ecologically Critical Areas ; Reserve Forest, protected Forest, Village Forest
The Forest Act 1927	Reserve Forest, protected Forest, Village Forest
The Wild Life (Preservation) (Amendment) Act, 1974	Declaration of Ecologically Critical Areas

Compliance of Legal or Policy Framework: Godagari Union Parishad as a Case

In order to explore the practical implication of above provisions, Godagari Union Parishad, Godagari Upazila, Rajshahi District has been chosen as a case. To make the study more specific, perspective planning process, project management, monthly meeting of UP and activities of standing committees were investigated. Because, according to the legal framework of UPs of Bangladesh the authorities mentioned are engaged with the governance process of local government.

Consideration of Environment Issues in Planning

In this study, "planning process" means the primary consultation process with broad-based groups, including beneficiaries, project-affected persons (PAPs) and community leaders, elected representatives, disadvantaged group and different development agencies in the area. In other words, local people are to be involved for finding out relationship between socio-economic development and environment. This process will be helpful to develop effective methods of people's involvement in project design, management, operation and maintenance, monitoring and evaluation, keeping the environmental issues as the central point of the planning.³⁵ This discussion will be more focused on development activities that are carried out by UPs in Bangladesh.

Union Parishads are responsible for performing a range of development activities, including construction and maintenance of small scale infrastructure (*katcha*³⁶ roads, bridges, canals, and culverts), potable water supply, and flood control infrastructure under Annual Development Program (ADP) Funding Project, Local Governance Support Project (LGSP), Relief and Rehabilitation Program (Social Safety-net Programs) and Direct Funding Program. In planning, design and implementation of the sub-projects under any fund, UPs have to consider the environmental issues according to legal and policy framework. In this regard, common people of the UP were asked about the following issues:

³⁴ LGD, op.cit.

³⁵ J.U Chowdhury, R. Rahman, M. M Haque, and M. Salehin, "Flood Loss Reduction in Bangladesh: Integrating Environmental Considerations into Economic Policy Making Processes", Vol. IV, pp.5-84, ST/ESCAP/2003, (New York : United Nations, 2003).

³⁶ Road, made with soil.

Table 2 : Public Opinion on Participatory Planning and Consideration of Environment (N=100)

Questions	Yes	No
Did the UP organize ward meetings or held open budget meetings?	00	100
Did the UP authorities consult with you during the time of planning?	7	93
Did the UP consider environmental issues during the time of development planning?	5	95
Did you give any information to the UP authorities for improving natural environment of your area?	3	97

[Source: Field Survey, 2010]

People's participation in planning processes is a central dimension of development activities for improving the efficiency and effectiveness of service delivery and institutionalizing democracy. In Bangladesh all donor-funded programs (like Local Government Support Program, SLGDP, Annual Development Program Funded Project etc.) ask the UP authorities to take necessary initiatives so that general people can participate in the affairs of local government. According to the Local Government (Union Parishad) Act, 2009, Ward Sava (Ward Meeting) will be organized two times a year by the UP chairman and members for problem identification, prioritization of problems, scheme identification, scheme prioritization and short-listing of projects in an open and inclusive manner. After Ward Sava (meeting) participatory planning processes will be held at Union level for preparing the budget. About the organizing of Ward Sava and held Open Budget Meeting, every respondent (100%) replied that UP did not organize any Ward Sava or Open Budget meeting in a year. Only 7% of the respondents said that the UP authority had discussed with the local people regarding selection of development projects of the locality and only 5% respondents replied that the UP considered environmental issues during the time of development planning. Furthermore, 97% respondent viewed that they did not give any information willingly to the UP authorities to improve the environment of their locality. While conducting FGD, most of the male UP members said that in decision making process, the chairman and the secretary played a dominant role and the chairman is not interested to organize Ward Sava and Open Budget Meeting for selecting local projects. A large number of UP members who were present in the FGD added that UP Chairman maintains good relation with upazila level officers of different departments, and in consultation with upazila and district level bureaucrats they select local projects. In this regard one of the female UP members said,

"We are members or chairmen of Ward Savas, but we did not get any opportunity to participate in these meetings, because our male counterparts and UP secretary did not inform us about the scheduled time of the ward sava. Interview with the respondents for this study reveals that the UP chairman is not interested to organize any meeting where people can participate to give their opinion on environmental issues" (Source: In-depth Interview, 2010)

When a chairman of a UP was asked about the consideration of environment in planning process, in *ward sava* or open budget meeting, he did not give positive answer about the consideration of environment rather he mentioned the causes for which he failed to consider the issues of environment. When we asked the UP chairman, he replied,

"Ward Sava and Open Budget Meeting are new initiatives to ensure people's participation. These are not popular practices in our UP, but we are trying to involve people in the decision-making process. We have resource constraints; we do not have enough human resources. We have to follow the guideline set by the government and the donors while making the plans and we need to do it within a very short time.

Furthermore, general people are not too much interested in participating in the planning process without financial incentives (Source: In-depth Interview, 2010)".

Thus, information revealed that common people are not informed about the management of environment in sustainable manners. However, the members and the chairman of the UP are not well aware of sustainable development and environmental laws either. Though donors and government agencies provided different environment management guidelines, they do not follow these guidelines at the time of planning or scheme selection.

Consideration of Environmental Issues in Project Implementation

Development practices without considering environment affect the quality of life and environment. To solve the problem, the policy makers at national and international levels have initiated environment-friendly development management approach which is popularly known as sustainable development approach.³⁷ The main theme of sustainable development strategy is to involve the stakeholders in development management process. At UP level, stakeholders can be involved in implementation process through indirect involvement as beneficiary or information source or can be direct participant as member of Project Implementation Committee (PIC). PICs have 5-7 members for each project, who will be responsible for translating plans into actions in close collaboration with the Union Committee. PIC will monitor implementation in order to ensure that this project has no adverse impact on environment or biodiversity or society. Both formal and informal communications with local people, including PAPs will be maintained by the PIC. Apart from these activities, day to day reporting, including data collection and preparation of activity/progress reports of the project will also be carried out by the PIC. Union Committee is assigned to select all projects and beneficiaries in consultation with the community and the ward members, preparation and regular updating of the beneficiary muster roll, conducting environmental and social assessment of projects. The Union Committee will also coordinate with the PICs for collecting data and providing a progress report to Upazila and District level authority, giving special consideration of environment.

The study tried to capture the common people's perception about the role of PIC and UC regarding environment issues. Following table will reflect the people's perception on environmental activities of UP:

Table 3 : Environmental Issues in Project Implementation (N=100)

Questions	Yes	No
Did you hear anything about UC and PIC?	37	63
Did you know the role and responsibility of UC and PIC?	12	88
Did PIC/UC members discuss with you about environment issues about project implementation with you?	3	97

[Source: Field Survey, 2010]

Field survey revealed that 37 percent heard about PIC, 12 percent replied that they know about the role and responsibility of PIC. However, only three percent respondents told that PIC members discussed with them about the environmental issues of the ongoing project.

In the time of FGD, most of the UP members said, 'Upazila level officers evaluate the environmental issues of different projects, so we do not consider environmental issues during the implementation. Moreover, common people are not well aware of environmental

³⁷ Rosenbaum (1993) defined sustainability as use of methods, systems and materials that won't deplete resources or harm natural cycles

(Retrieved from <http://www.arch.wsu.edu/09%20publications/sustain/defnsust.htm>, Accessed on -22.05.2010).

issues and they have no interest in participating in environment related discussion. (FGD, 2010)".

Also, when environmental laws and policies were highlighted, it was found that no elected UP member was well aware of the environmental laws which are relevant to the project implementation at the community level.

One of the PIC members of a project of the UP, who is selected as non-elected member said, "PIC members are selected by the chairman, male UP members and local level political leaders of the ruling political party. Maximizing their personal benefit is the only concern of all PIC members rather than the interest of the community, including environment (In-depth Interview, 2010)".

Environmental Issues in UP Monthly Meetings

Under the Local Government (Union Parishad) Act, 2009, UPs should organize monthly coordination meetings where the chairman, ward members (female and male) and secretary have to participate to discuss overall development issues of the UP. This forum acts as a policymaking body. To investigate the consideration of environmental issues in this meeting the chairman was asked, "Did you discuss environmental issues in the UP monthly meetings?" He replied, "In the monthly meetings we discuss activities of UP on the basis of priority. If we feel the need to consider the environmental issues in project management, of course, we have to discuss this issue, but we do not discuss environmental issues in every meeting (In-depth Interview, 2010)".

In order to investigate the environment management issues at UP, the minutes of last five meetings were reviewed. However, no directive decisions were found about governance of natural resources. One noticeable fact is that the chairman tries to integrate environment-friendly activities under 100 days work and food for work in the form of compost preparation, digging of ponds and *moja nala* (outdated water source) for water harvesting and fish cultivation.

Consideration of Environmental Issues in Standing Committees Activities

According to Section 45(1) of Local Government (Union Parishad) Act 2009, for making the UP more active and efficient, UP authorities will form 13 standing committees, one for each of these areas: (a) finance and establishment (b) tax fixation and revenue collection (c) audit and accounts (d) education, health and family planning (e) agriculture, fisheries and livestock and other development works (f) rural infrastructure development and maintenance (g) law and order maintenance (h) birth and death registration (i) sanitation, water supply and sewerage (j) social welfare and disaster management (k) environmental development, environmental conservation and tree plantation (l) family dispute resolution, welfare of women and (m) children, culture and sports. Despite having obligation for each standing committees to consider environment related issues while discharging their responsibilities, however there is a provision for formation of a specific committee entitled "Committee on Environmental Development, Environmental Conservation and Tree Plantation" that is entrusted with the responsibilities of considering environmental issues. Recognition of environment is not new in the policy of Bangladesh. The Local Government (Union Parishads) Ordinance, 1983, Local Government Union Parishads (Amendment) Acts. 1993 and 2001³⁸ also have taken environmental governance issue into cognizance. To explore the standing committees' role in environmental governance perception of the committee members have been captured whose responses are presented in the table 4 below:

³⁸ Kamal Siddiqui, *Local Government in Bangladesh, (Revised Third Edition)*, (Dhaka : The University Press Limited, 2005).

Table 4 : People's Perception on Environment Related Committee (N=100)

Questions	Yes	No
Did you hear anything about committee on environmental development, environmental conservation and tree plantation?	12	88
Did you know the role and responsibilities of environmental development, environmental conservation and tree plantation committee?	5	95

[Source: Field Survey, 2010]

Field survey revealed that 12 percent heard the name of committee on environmental development, environmental conservation and tree plantation while 5 percent replied that they know about the role and responsibilities of that committee.

When the members of the standing committee on environment were asked, it was revealed that they are not well aware of their responsibilities. All the members also accepted that there is a lack of awareness regarding the involvement of environmental issues in the management of UP's business. Furthermore, they believed that effective functioning of standing committees would help UPs to ensure the sustainability of development management with better service delivery (In-depth Interview, 2010).

It is a usual practice in the UP governance that standing committees are not formed and they do not function properly. A previous study found that most of the standing committees are nonfunctional even though 4 or 5 have been found formed in pen and paper. Most of the UP Chairmen and Members do not know how many standing committees should exist at UP level and what their roles should be. Even the chairmen and the secretaries are not all aware of the 13 committees.³⁹

Highlighted Environmental Governance Related Issues of the Selected UP

Considering the inductive reasoning approach of epistemology, perception of the common people has been considered. On the basis of their perception some critical issues of environmental governance have been highlighted in the Box-1.

Box 1: Environmental Governance Issues

- Common people and elected representatives are often indifferent towards the issues of sustainability and environmental governance.
- Because of patron-client relationship in rural power structure all people do not participate in UP decision making including, consideration of environmental issues in decision making.
- A good number of policies and laws are available to deal with environmental degradation but institutional network (among central government, field administration, donors and CSOs) hardly deal with environmental problems keeping the UP at the central point.
- UP does not possess the capacity to deal with environmental issues because they have limited human and financial resources.

Discussion and Conclusion

Environmental degradation and adverse impacts of natural disasters are often observed in Bangladesh as a result of poverty, over-population and lack of awareness. In recent years, state and non-state actors have taken some important steps for safeguarding the environment, for better utilization of natural resources and addressing pollution. To ensure

³⁹ S. T. M Haque, "Challenges of People's Participation at Local Governance: A Case Study on the Standing Committees of Union Parishad in Bangladesh", *Nepalese Journal of Public Policy and Governance*, Vol. xxiv, No.1 (2009).

sustainable development at grassroots level LGIs and NGOs are involved in this process. To guide these organizations, government and other actors provided policy framework. This study revealed that to govern the environmental management at UP level, the UP has a legal base or policy framework. However, there is a gap in translating these policies in practice. Policies suggested that local government authorities will take decision ensuring public participation. The study found that very few attempts have been made by the authorities to ensure public participation. In addition, it was further observed that elected representatives of Union Parishad do not have adequate knowledge about issues relating to sustainable development and they hardly deal with the activities that have negative effect on environment.

In this regard, lack of proper knowledge on environmental issues and laws, lack of commitment of policymakers, including international actors and local actors such as elective representatives are obstacles to implement the environmental policy. Though international and national policy makers highlighted that local level institutions can play significant role, they did not take proper initiatives to improve the institutional capacity to tackle the environmental degradation. This issue is not only observed by this study, but other observations also reveal that lack of enthusiasm and awareness of the policymakers are major causes of poor policy implementation in environmental governance.⁴⁰

However, this study found that community people are not very concerned about environmental issues. Because of poverty, lack of basic education and lack of community mobilization for creating awareness, most of the people are unconscious about environmental suitability of development activities.⁴¹ These findings disclose that demand side of environmental governance at local level is not strong to put pressure on the local government.

It was found that the selected UP is working on various types of projects or programs. While having a discussion with the respondents about consideration of sustainable development issues in every program or project planning, it was found that organizations do not consider the issue of sustainable development in every project. Also, at the UP level, there is a provision of having representatives of the local community in Project Implementation Committee (PIC) of any specific project. However, it was found from the field study that there is hardly any scope for the general people and women to be a member of PICs. As a matter of fact, people having good connection with the UP chairman and ruling political party leaders usually get selected as a member of PIC. There is hardly any example where PICs consult with locals while discharging their duties. Even members of PIC do not consider the issue of natural resource management during the time of project implementation. Elected representatives as well as secretary of the UP do not bother to consider activities related to environmental governance in their regular monthly meetings.

To conclude it can be said that despite having sound policy framework for prioritizing environmental issues in the governance of UPs, a huge gap still remains that creates hindrance in the process of successful implementation of these policies. Behind this gap, lack of enthusiasm of elected leaders, lack of proper function of internal organizations of UP (like standing committees, PICs etc.) and lack of environmental knowledge among the common people are held responsible for non-implementation of policies.

⁴⁰ A Nishat. *Policy and Legal Premise for Environment and Natural Resources Management in Bangladesh: Issues concerns trends and institutional Framework*, Dhaka : UNDP Bangladesh Policy Dialogue Series No-11, April-17, 2007.

⁴¹ A.M. Sharafiuddin and A. Rahman. *Environmental Education and Awareness, Environment and Development in Bangladesh*, (Part-1)(Dhaka: University Press Limited, 1994).

THE ANATOMY OF UNDERDEVELOPMENT IN BANGLADESH: TOWARDS AN INTEGRATIVE FRAMEWORK

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Abstract: The purpose of this paper is to figure out the anatomy of underdevelopment in Bangladesh by offering an integrative framework consisting of four dimensional structural factors—economic, political, social and cultural. Moreover, the paper aims to use the dependency, the world system and the political economic approaches for unearthing the historical formation and recent composition of underdevelopment in Bangladesh relating to the discussion on the formation of post-colonial capitalism, state and class. It is also an attempt to update my previous arguments and analyses on underdevelopment in Bangladesh.

Introduction

By offering an integrative framework consisting of four dimensional structural factors—economic, political, social and cultural—the purpose of this paper is to figure out the anatomy of underdevelopment in Bangladesh. The paper, moreover, used the dependency, the world system and the political economic approaches for unearthing the historical formation and recent composition of underdevelopment in the context of the formation of capitalism, state and class. Besides, the paper has an attempt to make further argument on underdevelopment based on one of my earlier analyses (Mondal, 2013) of development and underdevelopment in Bangladesh. Basically, in the present paper I have added the political economic approach as a theoretical guideline and brought four dimensional structural factors adding the cultural factors along with political, economic and social ones. In South Asia or in Bangladesh, the history of underdevelopment can be found in the earlier Indian tradition portrayed by Bernier (1656-68) and Abul Fazal (1873, 1891, 1894); and latter in the Western tradition depicted by Montesquieu (1748), Hegel (1824a, 1824b, 1857), Adam Smith (1776), Marx (1848, 1853, 1857, 1867, 1894), Weber (1904/05, 1908, 1916), Wittfogel (1957) and Myrdal (1968). For example, Bernier in his magnum opus *Travels in Mughal India* claimed that there was no private property in land in India and the king was the proprietor of the land (1891:252). Similarly, Abul Fazal gives a very detailed description about the social history under Mughal rule in *Ain-e-Akbari* where (in volume 2) he discussed governmental system, war, conquest, dynasty changes, land, taxation; especially land and revenue system in *Subha Bengal* which was divided into 19 *Sarkars*. Thus, it can be assumed that the element of underdevelopment can be found both in land tenure system and taxation.

As a theoretical framework the dependency theory argued that development is limited where expropriation of potential surpluses and external economic exploitation are present (Baran,

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1957; Furtado, 1964; Frank 1967). Besides, dependency theory claims that development and underdevelopment are interdependent in nature within the one global system which has been conceptualized as: "...a conditioning situation in which the economies of one group of countries are conditioned by the development and expansion of others" (Santos, 1970: 231; Koo, 1984:35). Moreover, the world system theory is also quite significant for this paper because it is highly a value-laden approach to the problem of underdevelopment in the Third World countries like Bangladesh. The pattern of underdevelopment can be explained by this approach involving the idea of exploitation generated from the unequal bilateral relationships between the core and the periphery (Wallerstein, 1973, Friedman and Wayne, 1977). In this context, dependency and world-system theories, according to Koo (1984), can be regarded as the same theory which shares the same assumptions, the same approaches, and the same terminologies. But the only striking difference between the two is found in respect of their looking at the global structure of the center-periphery relationships where one looks at this structure from below—*the viewpoint of a particular peripheral nation*; and other looks at the same structure from above—*the context of the capitalist system itself or of core nations* (Koo, 1984:38).

In addition, as a third theoretical framework in this paper, political economic approach (Koo, 1984) has been used for understanding the underdevelopment in terms of three primary foci of analysis: (1) dependency or world capitalist system, (2) internal class structure and class conflict of the peripheral society, and (3) the structure and the role of the peripheral capitalist state. Furthermore, for analyzing the determinants of underdevelopment I have also used the notion of "lumpen bourgeois" coined by Gunder Frank (1972). By these ideas I have examined the inherent character of underdevelopment in Bangladesh where the analysis has been placed divided into four imperative features such as: economic, political, social and cultural. Besides, the recent formation of lumpen class and lumpen capitalist order in Bangladesh have been found based on the process of political conflict and violence, land grabbing, stock market crashing, money laundering, corruption, corporate and white color crime, and so forth.

Thus, an integrative framework has been developed through these theoretical understanding for analyzing the pattern of underdevelopment in Bangladesh. Accordingly, the indicators associated with underdevelopment such as: passive democracy, pluralistic ignorance, factionalism and intolerant political culture, law for repression, politically designed justice, religious fundamentalism and absence of secularism have been encapsulated (Mondal, 2013). Besides, an attempt has been made to explore the formation of capitalism and class which have the consequential impact on poverty, marginality, unemployment.

Genesis of Underdevelopment in Indian Subcontinent

In this section, an attempt is made to trace the historical roots and structures of underdevelopment in Bangladesh. Accordingly, the discussion can be started with Charles Montesquieu (1748) who was the most potential thinker. For Montesquieu, the nature of ecology determines the social and cultural life. For example, he said that in Asia: the state rule is autocratic, the whole consciousness is embedded in the idea of slavery, the people are never found free, and coercion is the destiny for the people (Montesquieu, 1748). In Marx's analysis it is found that Asia fell asleep in history, and dynasties here might have changed; but by and large the structure of the state remained the same until an outside force penetrated into the system (Marx 1851, 1853). For Marx, hydraulic economy, despotic government, rigid caste system and the absence of private property were the main characteristics of Asiatic Mode of Production which is considered as the major impediment for flourishing of capitalism in Asia or India (Marx 1853, 1856). Moreover, during the correspondences with one another Marx and Engels had agreed that the absence of private property was the key to the Oriental world. In Marx's own words: "The basic form of all phenomena in the East as to be found in the fact that no private property

in land existed. This is the real key even to the oriental heaven" (Marx, Herald New York Tribune Ibid, 2nd June, 1853)."

In addition, according to Marx, the phase of primitive capital accumulation all over the world started from plundering by the European invaders which is regarded as the genesis of capitalist development as well as underdevelopment. For example, it is noted that all over the world the process of primitive capital accumulation is to some extent the same by nature such as:

We can broadly distinguish two phases of the relationship between capitalism in advanced countries and the pre-capitalist modes elsewhere. The first belonged to the period of primary accumulation of capital, one important element of which was the accumulation of money-capital supported by the drain of wealth from the colonies. The Spanish plunder of Latin America, the sacking of Indonesia by the Portuguese and the Dutch, the French profits from the slave trade, the British gains from slave labour in the West Indies and the loot of India—these were some of the episodes of this phase (Patnaik, 1973:200).¹

Regarding the genesis of capitalism in any country, Marx identified three factors such as: (1) a rural social structure which permits the peasantry to be set free at a definite point, (2) the urban craft development that produces specialized, independent, non-agricultural commodity production in the form of crafts, and (3) accumulation of monetary wealth derived from trade and usury (Marx, *Pre-Capitalist Economic Formations*, in *Grundrisse* 1856; Sen, 1982). According to Sen (1982) India lacks only the first characteristics among the three, and this is why she failed to develop Western style capitalism.

In Weber's *The Religion of India: The Sociology of Hinduism and Buddhism* (1916), he asked a question: why the Chinese and Indian state did not evolve rationally; in response he said that it was because of despotic state, absence of trade cities and the mystified caste system. He also argued that like Confucianism in China Hindu religion, as one factor among many, was a barrier for capitalism in India (Weber, 1958:4). Moreover, Weber's theory of prebendalization on India and China was another necessary source for perceiving underdevelopment. For Weber, prebend system is resemblance to the Indian land tenure system where the state in theory was the overall owner of lands; and, those who collected land revenue on behalf of the state were contractors or officials (Karim, 1983). Weber, therefore, describes these phenomena as not feudalization, but prebendalization of the patrimonial state. Accordingly, it is evident that land tenure system was historically a political phenomenon where ownership of land was a question of exploitation, oppression and exclusion. Thus it is said that this land tenure system and patrimonial state are the root constraints for the emergence of capitalism or the overall development in India or in Bangladesh.

Another expedient development thinker Gunnar Myrdal in his book *Asian Drama: An Inquiry into the Poverty of Nations* argued that underdevelopment can be traced out through the failure of the following conditions such as: (a) rationality, (b) planning for development, (c) rise of productivity, (d) rise of levels of living standard, (e) social and economic equalization, (f) improved institutions and attitudes—which include orderliness, diligence, preparedness for change, efficiency, energetic enterprise, scrupulous honesty, integrity, and self-reliance, and (g) national consolidation (Myrdal, 1967).

¹ In this context, Brooks Adams also showed that: "...the Bengal plunder began to arrive in London, and the effect appears to have been instantaneous...the industrial revolution began with the year 1760—the battle of Plassey occurred in the year 1757 (Patnaik, 1973:200)." Besides, Digby records estimates which for India alone put the figure for treasure taken between Plassey and Waterloo, anywhere between £500 m and £1,000 m (Quoted in P. A. Baran, "Political Economy of Growth", London: 1957).

The Anatomy of Underdevelopment in Bangladesh

In this paper it is argued that the anatomy of underdevelopment is an ample panorama for understanding the linkage between underdevelopment and four dimensional structural factors—economic, political, social and cultural. It has been mentioned earlier that the nature of underdevelopment in Bangladesh is very much related to the formation of capitalism and class. It seems that the present pattern of capitalism in Bangladesh is going through the phase of primitive capital accumulation that Marx (1867) portrayed in volume One of *The Capital*. According to Marx, the advent of capitalism in early Western Europe was based on plundering and ruthless exploitation of surplus value. In the womb of history, we find over two hundred years of plundering and exploitation in Bangladesh by the British and latter by West Pakistan; while they extracted almost all the potential surpluses which could give-birth to capitalism in the real sense (Mondal, 2013). But, now, the formation of class has become global or hybrid (known as comprador and lumpen bourgeoisie, according Frank, 1972) which was once colonial (merchant bourgeoisie, according to Alavi, 1972 and Sen, 1982). This is why, the real class formation can be traced out in the process of prowling capital accumulation by the elite immediately after the independence, who are now, according to Frank (1972), labeled as lumpen Bourgeoisie.

In Bangladesh, immediately after the independence, it was found that land grabbing and plundering of state properties were the mode of capital accumulation by the Army, politicians, civil bureaucrats and local musclemen (Mondal, 2013). Besides, foreign aids and grants were also the ways of money making by particular sects of people. Latter, in the 1980s, when national bourgeoisie thrived as garment businessmen, the ruthless surplus appropriation transformed the feudal mode of production into the capitalist one. Moreover, the incisive form of capital accumulation gained its peak at the period of General Ershad and still it is continuing with a hideous and rampant pace (Mondal, 2013). In the early 1990s, the nature of capitalism has been changed drastically because of neoliberal intervention. In this phase developed the comprador class the NGOs capitalism, the real estate businessmen, bankers, entrepreneurs in pharmaceutical industries, private universities, remittance earner etc.

Thus the formation of capitalism in Bangladesh is not based on Western rationality; rather it is based on plundering and exploitation which can be labeled as lumpen capitalism. The study explored the variety of structural dynamics of underdevelopment which are viewed as the finished product of lumpen capitalism; while development is seen as the byproduct (Mondal, 2013). It has been seen that ten or fifteen years back what was open urban space in Dhaka is now almost covered by the multistoried buildings, shopping malls, business centers or private universities which is seen as: the more the urban space exploited by the multiplicity of plunderers, the more the money extracted; or in other words the more skills possesses in plundering, the more possibility s/he has of pecuniary gain (Mondal, 2013). As are mentioned above, the integrative framework for understanding the anatomy of underdevelopment is consisting of four dimensional structural factors, it is the proper place and time to start the discussion. The writer thinks that underdevelopment is a holistic entity which is the eventual product of lumpen capitalism. In the next of the paper these economic, political, social and cultural factors are discussed one after another.

Economic Factors

Classical Marxism believes that almost all economic system reaches its adult phase after passing the primitive accumulation period. In post-independent Bangladesh, it has been found that this argument is much pertinent to explain the nature of economy. For example, the development strategies of the newly emerged Bangladesh were influenced by macroeconomic policies (Clarke, 1977; Burnham, 1993) and this policies gave birth to the opportunities for state intervention in market economy which eventually created a space for the newly emerged entrepreneurs, politicians and bureaucrats for grabbing the markets

and plundering the state resources and benefits (Mondal, 2013). Accordingly, this elite group that constituted a fraction of the total population² gained the monopoly of ownership and control over economic resources and political power which made a lopsided influence on the rest of the society (Sobhan, 1989; Humphrey, 1992; Kocahnek, 1993; Rahman, 2007). Although this group of people who was mainly responsible for misappropriation of all actual and potential surpluses was also interested in conspicuous consumption rather than investment. In this context a relevant example is quoted below:

Accumulation of capital for the purpose of making a profit is characteristic of capitalism. There was little accumulation of capital in this sense in precapitalist societies, although there were massive investment in cities, palaces and temples, roads and irrigation works in such countries as India, China, Egypt and the Inca empire of South America... systematically removed the fruits of labor to Europe or the new countries of white settlement, accumulation of capital in the conquered land was hampered both by the removal of the surplus and by the lack of capitalist class to invest whatever surplus there might have been and increase the productive assets in the country (Bagchi, 1982:31).

In this context, this paper shows the pattern of underdevelopment in Third World countries like Bangladesh by the political economic approach, like Hagen Koo (1984:34), which is divided into three primary sections of analysis: (1) dependency theory or the world economic system for analyzing the obstacles of capitalist development; (2) the formation of capitalism and class structure; and (3) the role of state in making relation between the above two sections.

Table 1 below depicts the political economy of underdevelopment in Bangladesh which incorporates the analysis of: (1) obstacles for the advent of capitalism as a part of the world economic system, (2) formation of class based on the dialectics between state and economy, (3) formation of the state based on the dialectics between state and class, and (4) formation of capitalism based on the dialectics between economy, state and class.

Table 1: Political Economy of Underdevelopment in Indian Subcontinent Especially in Bangladesh

(I) Obstacles for the Advent of Capitalism (as a part of the world economic system)
Karl Marx (1852,1859, 1867): 1. Mode of production as Asiatic which is responsible for underdevelopment. 2. It includes Oriental despotic state, no private ownership in land, village community, ³ absence of decentralization of political power, and hydraulic economy.
Max Weber (1958 [1916]:4): 1. Oriental rationality is the basis of underdevelopment which includes no asceticism, no rational organization/institution, no rational labor, no free city, rigid caste system, no motivation for the world success, and absence of personal enterprise. 2. Hindu religion, as one factor among many, was a barrier for capitalism in India.
Adams Brooks (1959:250-256): 1. Major features of Indian underdevelopment are rooted in the process of massive plundering of its wealth by the British particularly between 1760 and 1815.

² According to Siddiki (1990) they are less than 2% of a total population. Similarly, according to Barkat (2012) 47 million or 31.3% people of the country are middle class and the rest 4.1 million or 2.7% are rich or affluent.

³ The villagers are governed by a local council, either a *Panchyat* of all caste or a *Panchayat* a major 'clean' caste or a *Panchyat* of most powerful caste (Bagchi, 1982:10).

<p>Samir Amin (1974):</p> <ol style="list-style-type: none"> 1. Underdevelopment is rooted in the process of capital accumulation from the colonial countries for the benefit of the centre. 2. The underdevelopment of the peripheral countries is the consequence of the development of capitalism on the world scale. 3. Unequal exchange or the hidden transfer of values between centre and periphery is the main cause of underdevelopment (Sau, 1975:1271)
<p>Hamza Alavi (1972:59-81):</p> <ol style="list-style-type: none"> 1. Colonial underdevelopment (in India): colonial mode of production, colonial exploitation under direct rule, subordinate native social classes, colonial state apparatuses e.g. bureaucratic-military apparatus and mechanisms. 2. Post-colonial underdevelopment (in West and East Pakistan): military-bureaucratic oligarchy; convergence of interests of the three competing classes—indigenous bourgeois, the Metropolitan neo-colonialist bourgeois, and the landed classes; weak and underdeveloped indigenous bourgeois; and direct appropriation of almost all of the economic surpluses by the post-colonial state(s) in the name of promoting economic development.
<p>Anupam Sen (1982:6-7):</p> <ol style="list-style-type: none"> 1. Merchant capitalism failed to commence industrial capitalism because of colonial plundering and exploitation. 2. There was very weak element in society for producing an indigenous bourgeoisie because the social formation was partly Asiatic, partly feudal and partly capitalist. 3. State's autonomy on indigenous social classes was severe. 4. Post-independent state inherited the colonial nature of autonomy in the private corporate sector. 5. State owned industries thrived to some extent; state promoted the artisan industries while private sectors were neglected.
<p>Amiya Bagchi (1982:4-8):</p> <ol style="list-style-type: none"> 1. Social formation based on non-capitalist mode of production which includes extraction of surplus in the form of rent, forced labor and centralized bureaucracy. 2. Continuous flow of surpluses out of India and consequent failure to reinvest the surpluses in working capital. 3. Failure to create Western European type feudalism and private ownership in land. 4. Lack of social organizations for developing industry and free wage labor.
<p>Vivek Chibber (2004:ix,4):</p> <ol style="list-style-type: none"> 1. In post-colonial Indian subcontinent, state-led development policies and programs failed to develop the institutional capacity of the advent of industrial capitalism for the half-century following independence or until the onset of liberalization in the 1990s. 2. By institutional capacity he meant the twin evils of bureaucratic paralysis and capitalist rent-seeking.
<p>(II) Formation of class (based on the dialectics between state and economy)</p>
<p>Karl Marx (New York Daily Tribune, 5 August, 1853):</p> <ol style="list-style-type: none"> 1. In Madras and Bombay, a class like a French peasant proprietor who is at the same time a serf and the métier of the state. 2. In Bengal, a class like a combination of English landlordism of the Irish middle man system and of the Austrian system—transforming the landlord into the tax-gatherer and of the Asiatic system taking the State the real landlord. And other classes are the <i>Zamindar</i>, money-lender, and <i>Rayatas</i>.
<p>Hamza Alavi (1972:59-81):</p> <ol style="list-style-type: none"> 1. In East Pakistan, colonial mode of production produces three propertied (who owns property) classes such as: (a) indigenous bourgeoisie, (2) the Metropolitan neo-colonialist bourgeoisies, and (c) the landed classes. 2. In Bangladesh: for Alavi, there are two major classes such as: (a) <i>Contactors</i>— the 'contactors' were educated Bengalis, with influential bureaucratic contacts, who were

<p>granted all kinds of permits and licenses for business dealings; and (b) <i>Contractors</i>: a group of small businessmen who were allowed to take benefits from the state in terms of construction, tax evasion, generous loans and official support.</p> <p>3. Conflicting class: The relationship between politicians/political parties and bureaucratic-military oligarchy is ambivalent; it is competitive as well as complementary.</p>
<p>Anupam Sen (1982:2, 80-81):</p> <ol style="list-style-type: none"> 1. In pre-colonial Bengal (along with India) the major classes were seen as commercial or merchant bourgeoisie. 2. In colonial Bengal (along with India) metropolitan bourgeoisie, new middle class/literate class (a class of imitators, not an originator of new values and methods) and <i>Zamindars</i> were emerged.
<p>B. K. Jahangir (1977: 2063-2066):</p> <ol style="list-style-type: none"> 1. Jahangir addresses the class categories for rural Bangladesh where he showed the major class categories as: rich peasants, rural entrepreneurs, urban investors in agriculture; poor peasants, landless laborers, and wage laborer.
<p>A. I. Mahbub Uddin Ahmed (2012:80):</p> <p>Using the class category of Marx (1848, 1853, and 1894) and Frank (1966, 1972) Ahmed shows the following classes in Bangladesh:</p> <ol style="list-style-type: none"> 1. Comprador (mediating) bourgeois: NGOs, Civil Societies, military and civil bureaucracies (those who accumulate capital through foreign aids, project grants and FDI). 2. Lumpen bourgeois: plunderer (those who accumulate capital through plundering). 3. Lumpen petit bourgeois: civil society, intellectuals and professionals (those who accumulate capital through lumpen ideological hegemony). 4. National bourgeois: RMG and real estate owners (those who accumulate capital through dispossession). 5. National petit bourgeois: civil society, intellectuals and professionals (those who accumulate capital through remittance and salaries). 6. <i>Mastan</i>: military and civil bureaucrats, politicians, civil society and businessmen (those who accumulate capital through kleptocracy). <p>Own:</p> <p>Based on the class category of Alavi (1972) and Ahmed (2012) the following class typologies in Bangladesh are found:</p> <ol style="list-style-type: none"> 1. National metropolitan bourgeoisie: global/corporate businessmen, RMG owner, investors in real estate and pharmaceuticals. 2. Metropolitan comprador bourgeois: military, civil bureaucrats, NGOs, civil societies. 3. Metropolitan lumpen bourgeois: real estate, underground people, politicians, bankers, shareholders 4. Lumpen petit bourgeoisie: <i>mastan</i>, muscleman 5. National petit bourgeois: civil society, professionals, remittance earner 6. Landed class 7. Integrated class: bureaucrat-politician oligarchy, military-politicians oligarchy, politician-businessmen oligarchy and military-bureaucrat oligarchy.
<p>(III) Formation of the state (based on the dialectics between state and class)</p>
<ol style="list-style-type: none"> 1. Marx: State is not an embodiment of some abstract idea of political will or sovereignty but a reflection of the social dynamics resulting from either the constant change or relative stability of a mode of production and the resultant class configurations (Sen, 1982:1); political power or state is an object of class; state is the spokesman of bourgeoisies. 2. Miliband: The modern state is primarily a coercive or ideological instrument of class rule. The state is embodied in its various apparatuses—the bureaucracy, the police, the judiciary, the military, etc. (Sen, 1982:7). 3. Poluontaz: The main function of the state is to preserve and strengthen the capitalist mode of production and therefore, the state secures the rule of the economically dominant classes. And to perform this function adequately the state needs a relative

- autonomy from the dominant classes (Sen, 1982:7-8).
4. Hamza Alavi (1972:59-81): post-colonial society inherits the overdeveloped apparatus of state and its institutionalized practices; state is not established by an ascendant native bourgeoisie but instead by a foreign imperialist bourgeoisie; state is relatively autonomous and it mediates between the competing interests of the propertied classes; state in the post-colonial society directly appropriates a very large part of the economic surplus and deploys it in economic activity in the name of promoting economic development;
 5. Anupam Sen (1982:8): to preserve the unity and cohesion of the capitalist class, to safeguard the general interest of the bourgeoisie, it becomes necessary for the state to acquire freedom of action or functional autonomy with regard to the fractions of capital, so that it does not endanger the common interests of the capitalist class by promoting particular interests.

(IV) Formation of Capitalism (based on the dialectics between economy, state and class)

1. *Pre-colonial and colonial*: The advent of capitalism in India or in Bangladesh is based on: (1) the transshipment of semi-feudalistic mode of production to transplanted capitalism by the British rule; or (2) colonial capitalist social order/merchant capitalism to modern capitalism.
2. *Post colonial*: (a) industrial capitalism, (2) financial capitalism, (3) lumpen capitalism and (3) NGOs capitalism.
Modes of capital accumulation: foreign aids, grants, remittance, small scale industrialization, micro-finance, banking, stock market, FDI, corruption, tax evasion, money laundering, loan scam, bribe, killing, corporate and white color crime, violence, extortion, occupational power, etc.
3. *Informalization of economy (powerful economic system of capitalism)*: hyper *Bastization*—as a way of life of lower/working class people, huge number of unskilled and low-paid labor force, unemployment, exclusion, marginality, poverty and criminality.

In addition, economic underdevelopment in Bangladesh is rooted in the process of unfair ways of capital accumulation such as loan defaulting, tax evasion, share market scam, money laundering, corruption etc. For example, the number of loan defaulters were more than 93 percent in 2006 (Rahman, 2007) and 122,437 in 2012 from 47 banks (Credit Information Bureau of Bangladesh Bank, 2012). Moreover, there are less than 1 percent taxpayers in a country of 160 million people in 2011 (NBR, 2011; TIB, 2011) which meant that tax evasion is severe, and it was equivalent to Tk. 21,000 *crore* in 2010-11 (NBR, 2011). Likewise, Bangladesh has been the most corrupted country in the world for five consecutive years from 2001 to 2005 which indicates that corruption is another obstacle for development along with the misappropriation of foreign aids and grants.

Political Factors

As mentioned earlier that passive democracy, pluralistic ignorance, factionalism, intolerant political culture, law for repression, politically designed justice and absence of secularism are the striking features of political institutions in Bangladesh (Mondal, 2013). For example, in terms of factionalism it is found that there are about 200 political parties in Bangladesh during 1980s with stern party fragmentation (Khan, Islam and Haque, 1996). Moreover, the country entered into the democratic system through the general election in 1991 after the end of about 15 years of military rule; though it is merely election based democracy. The proper practice of democracy is hardly found here. This is why the *Time* mentioned that democracy in Bangladesh is throttled by a poisonous political war between two major political parties-- Awami League and Bangladesh Nationalist Party (BNP); and it is marked by practices of parliament boycott, hyper-partisanship, state repression, national strikes like *hortal*, big brawl, violence, killing, armed conflict, extortion and violent crime (Sobhan,

2001: 84; *Time*, 10 April 2006:16; Mondal, 2013). For example, 827 *hartals* and 2,423 political conflicts have been found in democratic Bangladesh from 1991 to 2001 (Islam, 2006) and 51.7 percent of parliament members are found corrupt in their activities which ranges from the abuse of power to financial dishonesty (TI, 2012). Another recent example is the bribe scam in the proposed *Padma* multipurpose bridge project which also is a very acute sign of underdevelopment for Bangladesh. Because, having all the valid documents, the World Bank cancelled a US\$1.2 billion credit against the allegation of a high-profile corruption conspiracy among Bangladeshi government officials (The Globe and Mail, June 29, 2012).

Table 2: below shows the linkage between the prevailing political culture and underdevelopment (adopted from Mondal, 2013):

Table 2: Correlation between political culture and underdevelopment in Bangladesh		
Institutional dimensions of political Culture	Factors of political culture	Resulting facts for underdevelopment
1. Lack of trust among political parties	<ul style="list-style-type: none"> ▪ factionalism ▪ intolerant behavior ▪ corruption and nepotism ▪ conflict and violent crime ▪ patron-client relationship ▪ partimonialism ▪ anti-economic program like <i>hartal</i>, strike, blockade etc. ▪ innovation of caretaker government. 	<ul style="list-style-type: none"> ▪ poor rate of FDI, poor level of industrialization and few number of export products ▪ unskilled labor force, poor employment, unemployment, exclusion, marginality and poverty ▪ capital accumulation through tax evasion, money laundering, loan scam, bribe, low wage and killing.
2. Lack of trust between people and state/government	<ul style="list-style-type: none"> ▪ passive democracy (i.e. merely election based democracy) ▪ fascist behavior and pluralistic ignorance. 	<ul style="list-style-type: none"> ▪ absence of accountability, transparency and good governance ▪ unfair/irrational means of capital accumulation, corporate and white color crime, stock market crash ▪ absence of rule of law.
3. Lack of trust between people and administrative /judiciary system	<ul style="list-style-type: none"> ▪ law for repression and coercion ▪ justice for powerful/rich people. 	<ul style="list-style-type: none"> ▪ capital accumulation through violence, extortion, speed money, black money etc. ▪ capital accumulation through occupational power.
4. Lack of trust between individual, state and society	<ul style="list-style-type: none"> ▪ anomie, frustration, alienation, normlessness, deviant/criminal behavior. 	<ul style="list-style-type: none"> ▪ apathy to asceticism, short-cut method of pecuniary gain ▪ violence against women and minority group people.

Social Factors

Social indicators of underdevelopment in Bangladesh are mainly manifested in the form of illiteracy rate, unemployment, exclusion, marginality, poverty, rapid urbanization,

subjugation of women, hyper-basteization (*Baste* is partly resemblance to slum in the Western sense), traffic jam, crime, violence and many other things. For example, Bangladesh as a Third world country still has of its population illiterate (47 percent), though in 1970 it was 76 percent (BANBEIS, 2012, 2013). And tertiary level education is highly politicized because the public universities are performing the more political rather than academic role to the nation and have become the powerful agency of political socialization (Mondal, 2013). Some records show that there are around 1,000 teachers at Rajshahi University of whom around 325 belong to the progressive parties, 300 are loyal to BNP and 400 to Jamaat (*The Daily Star* February 11, 2010). Besides, the private universities are mainly selling certificates in the name of higher education without maintaining any quality of standard; though some are good ones. Moreover, the practice of meritocracy in labor market is nearly absent because of political intervention in the name of quota, political identity, regional identity, kinship ties and the like; and therefore, unemployed population in Bangladesh went up from 2.1 million in 2006 to 2.7 million in 2009⁴ (Xinhua, 2010).

Another imperative indicator for perceiving underdevelopment in Bangladesh is poverty. There are 32 percent poor⁵ people in Bangladesh whose daily income is less than USD1.25 (HIES, 2010). Though, the Government and Non-Government organizations are trying hard to reduce the rate and severity of poverty in Bangladesh, it is still considered the most influential factor of underdevelopment. Moreover, poverty creates such a situation that further expedites the condition of exclusion, marginality and vulnerability among the women, indigenous people and other ethnic minority people. Besides, in garment industry women gained greater economic power as more than 90 percent of garments workers are women, but they are an easy target for exploitation and discrimination because they earn 60% of the wages of these male colleagues and they are also sexually exploited. A report made by the *War on Want* (2011) claimed that 297 women out of a total of 998 experienced unwanted sexual exploitation.

According to a study report showed by the Metropolitan Chamber of Commerce and Industry in collaboration with Chartered Institute of Logistics and Transport for traffic jam in Dhaka BDT200 billion is lost every year because of killing 8.15 million working hours.⁶ Likewise, rapid urbanization is creating more slums in Bangladesh which is the eventual consequences of rural displacement caused by climate change, land erosion, salinity in land and water, reduction of the arable land, and usage of the modern equipment for land processing and crop harvesting.

Another most important factor of underdevelopment in Bangladesh is crime and violence, which is also the major concern of almost all countries in the world for blocking sustainable development. As a Third world country with colonial legacy, the pattern of crime and violence (in terms of plundering and killing) in Bangladesh is drastically connected with the process of underdevelopment. In other words, crime and violence are used here as a popular mode of capital accumulation. For example, in Bangladesh the following pattern of crime and violence are seen being used for capital accumulation: (1) state crime—through the elite forces, political demagogues, people in judiciary and administration, etc.; (2) corporate crime—through killing (e.g. killing in Tazreen Fashion garment factory and Rana Plaza), money laundering, drug trafficking, export/import dealings, etc.; (3) violent crime—through killing, contract killing, physical assault, rape, looting, extortion, etc.; (4) white

⁴ People's Daily Online; Retrieved from: <http://english.peopledaily.com.cn>

⁵ But a study conducted by Abul Barkat (2012) on "*Emerging Middle Class and Consumer Market in Bangladesh*" showed that there are 66 percent of people are still poor in Bangladesh.

⁶ StudyMode.com. 2011. "Dhaka City's Traffic Jam and Planned Solutions." Retrieved from: <http://www.studymode.com/essays/Dhaka-City-s-Traffic-Jam-And-Planned-556481.html>

color crime—through corruption, bribe, fraud, adulteration, tax evasion; (5) crimes against morality—prostitution, illegal gambling, and illegal drug use, etc; and (6) organized crime—through drug trade, illegal gambling, forced prostitution, smuggling, money laundering, human trafficking, black marketing, terrorism, etc. (Mondal, 2013).

Cultural Factors

Developmental thinkers frequently claim that cultural factors are very much crucial to gain economic success for any country. For example, East Asian countries like Japan, Taiwan, Singapore, North Korea or even China have their own unique cultural values for gaining their economic success. Hans Bosse, for another instance, connects the socio-cultural factors to the process of underdevelopment where he showed that 'pre-capitalist' or so-called 'traditional' modes of constitution of a society are the key constraints of development (1975:316). Accordingly, Bosse argued that in African societies, people have the motivation to build large-family, keep nativistic religious systems, practice rudimentary formalized religious education systems and to attach non-formalized education. Thus it is patent that the cultural values are generally embedded in the process of dialectical relation between individual and society where they produce and reproduce personality system, socialization pattern, norms, values, beliefs, customs and religious views.

In the context of Bangladesh it can be said that apathy to asceticism, short-cut method of material gain, irrational and mystic life, predominance of religious extremism and fanaticism are the main constraints of economic success. For example, religious extremism in Bangladesh is vigorously connected with the process of underdevelopment because their bigotry in ideology and religious sentiments keep the people in enchantment which keep mass people inactive in economic activities. Moreover, these people⁷ consider modern education, reasoning, free thinking, secularism, democracy and women's emancipation as major threats. Besides, these fanatic views have been used as finely tuned mode of capital accumulation because this accumulation process is connected to the international terrorism and underground economy which is very much related to the underdevelopment.

In the analysis of underdevelopment we find a linkage between culture and economic success or failure which is associated with the framework of Weber (1916), Parsons (1951), Hoselitz (1968), McClelland (1961), Inkelas (1969) and Inglehart and Baker (2000).

Table 3: below shows the cultural constraints of development in Bangladesh putting the analysis into the above mentioned theoretical frameworks.

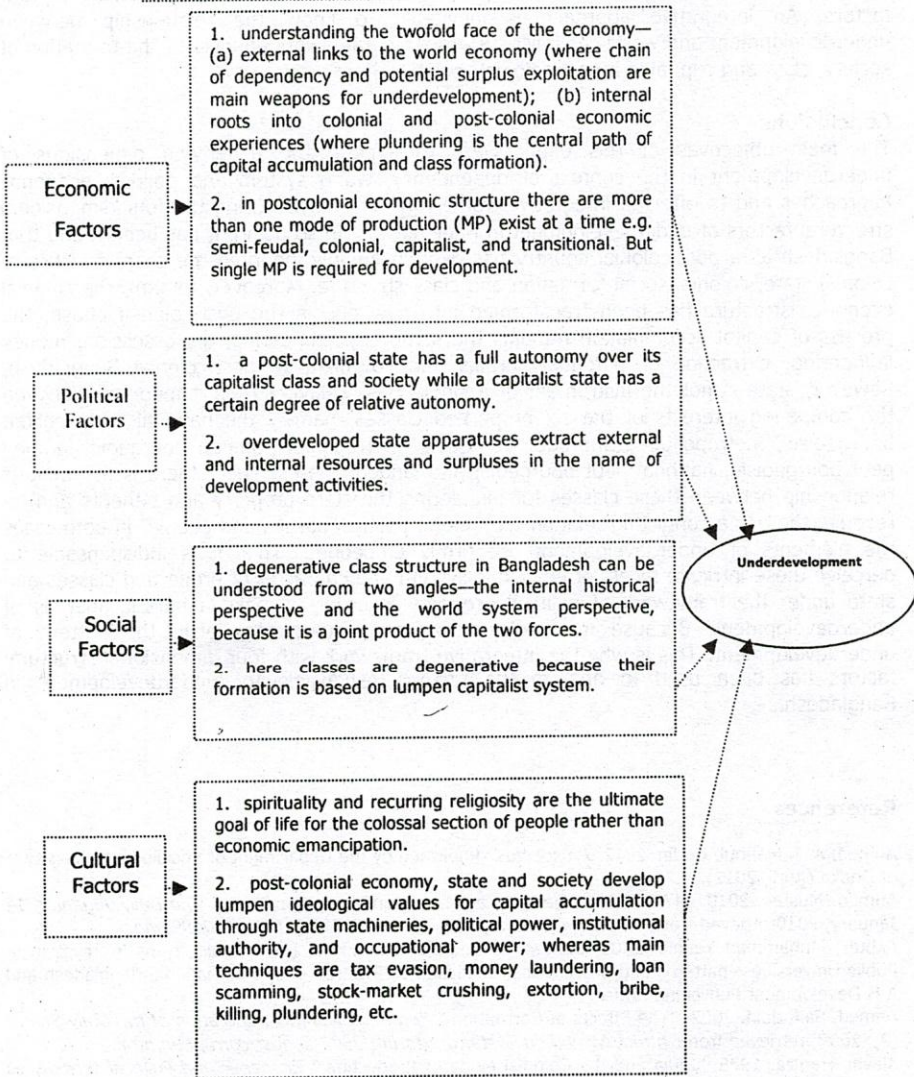
Table 3: Linkage between cultural factors and underdevelopment in Bangladesh

Theoretical outlines	Cultural indicators related to underdevelopment	Bangladesh as an example
Max Weber (1916)	<ul style="list-style-type: none"> • irrational social life • religious mysticism or enchantment • caste bound social system 	<ul style="list-style-type: none"> • wealth accumulation is a derogatory task in the eye of religion or society • salvation rather than economic emancipation is ultimate goal of life • inability to develop calculative and rational life for material gains.

⁷ Some recent terrorist parties in Bangladesh are: Purbo Banglar Communist Party (PBCP), Jamaat ul-Mujahideen Bangladesh (JMB), Harakat-ul-Jihad-ul-Islami (HUJI), Biplobi Communist Party (BCP), Gono Mukti Fouz, Allahr Dal, Kamtapur Liberation Organization (KLO), Borok National Council of Tripura (BNCT).

Talcott Parsons (1951)	<ul style="list-style-type: none"> socio-cultural factors which are related to the traditional values are: ascription, particularism, diffuseness, collectivity, and affectivity these factors shape the actors' personality system; social system; and value patterns of the cultural system. 	<ul style="list-style-type: none"> dependant attitude is found in people's personality which renders dependency ratio or economic failure practice of using traditional authority for any type of material gain absence of meritocracy because of corruption and nepotism emotional supports provided by the traditional family make members irrational and incalculative.
Robert F. Hoselitz (1968:155)	<ul style="list-style-type: none"> using Parsonian framework Hoselitz showed that lack of motivation toward achievement, universalism, and specificity keep people in non-developmental activities. 	<ul style="list-style-type: none"> society encourages traditionalism and ascribed power, not rational power and achievement tendency to accumulate capital through patrimonial state power and plundering.
McClelland (1961:105)	<ul style="list-style-type: none"> motivated toward conservative beliefs and values apathy to achieve success determined by after world ethics absence of entrepreneurship. 	<ul style="list-style-type: none"> discouragement for entrepreneurship fear to take risk and challenge for business purposes work ethics are determined by the other worldly religion.
Alex Inkeles (1969)	<ul style="list-style-type: none"> narrow views of social change reaction against social change fear about the future attached to irrationality, manual labor, and fatalism. 	<ul style="list-style-type: none"> conservative statesmen and politicians who are the mediators of old-fashioned developmental policy and activity capitalists are irrational actors, their target is irrational profit motive.
Inglehart and Baker (2000) ⁸	<ul style="list-style-type: none"> economic development is linked with systematic changes in basic beliefs, values and attitudes. rational, tolerant, trusting, and participatory values related to development. 	<ul style="list-style-type: none"> ambiguous attitude towards modernity and irrationality is the main thread of life and work lack of trust, blame-gaming and conflicting attitudes of the statesmen and politicians are related to non-developmental activities.

Figure 1: Integrative Framework for Understanding Underdevelopment in Bangladesh



This study used the data from the three waves of the World Values Surveys (time-series data from the earliest wave in 1981 to the most recent wave completed in 1998) which is comprised of 65 societies and 75 percent of the world's population.

Toward an Integrative Framework

Thus in order to get an integrative framework (see figure 1) for explaining underdevelopment in Bangladesh at the level of four dimensional structural factors—economic, political, social and cultural, this article tried to make a bridge among all four factors. An integrative approach is inevitable to know the relationship between underdevelopment and world capitalist system. This framework enunciates the formation of society, class and capital in a post-colonial society.

Conclusions

The main objectives of this paper were to explore the underlying dimensions of underdevelopment in the context of dependency, world system and political economic approaches and to offer an integrative framework for analysis using the four dimensional structural factors of underdevelopment in Bangladesh. In so doing, it has been found that Bangladesh as a post-colonial country has overwhelmingly inherited the characteristics of colonial state, colonial social formation and class structure. Moreover, though, the colonial economic structure has been transformed into new one in the post-colonial phase, the process of capital accumulation remains the same e.g. plundering, dispossession, money laundering, extraction of potential surplus and so forth. In post-colonial Bangladesh, however, state is not the instrument of a single class (Alavi, 1972); it mediates between the competing interests of the six propertied classes, namely the national metropolitan bourgeoisie, metropolitan comprador bourgeoisie, metropolitan lumpen bourgeoisie, petit bourgeoisie, national petit bourgeois, and landed classes. Then, there is a symbiotic relationship between these classes for plundering the state property and benefits and, in reverse, there is a conflicting relationship among political parties and people; in both cases the elements of underdevelopment are firmly embedded. Thus it is indispensable to perceive these intricate facets of economic system and character of propertied classes and state under the framework of political economy in order to make a holistic analysis of underdevelopment. Because no single factor is adequate to explain the pattern of underdevelopment. This is why the integrative framework with four dimensional structural factors has been used to analyze the factors responsible for underdevelopment in Bangladesh.

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WOMEN'S RIGHT TO PATRIMONIAL LAND IN BANGLADESH: A CASE STUDY OF TWO VILLAGES IN KUSHTIA DISTRICT

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Abstract: This study investigates the access of rural women to patrimonial land in Bangladesh. The study shows that although women's right to patrimonial land is recognized in state law, in practice women's access to patrimonial land has so far remained mainly illusory. The majority of the women do not get their share to patrimonial land and a small number of women get a small fraction of their due land. There are a number of reasons that bar rural women from their access to patrimonial land. The main reasons are lack of awareness, appropriation of land by the brothers, not claiming the share by the women themselves lest it destroys the relationship with brothers, giving up their share to poor brothers and not claiming their share on the ground that father met expenses of their marriages by selling land. Awareness developed in the women, enactment of stern law against appropriation of women's land and its implementation along with the implementation of anti-dowry law are necessary for ensuring women's access to patrimonial land.

Introduction

Under international human rights law, women have a right to own and administer property without discrimination (UDHR; Articles. 2 and 17, CEDAW, Articles. 15), and to an "equal treatment in land and agrarian reform" (CEDAW, Articles. 14(2)(g)). Within the family, both spouses have equal rights in the "ownership, acquisition, management, administration, enjoyment and disposition of property" (CEDAW, Articles. 16).

Soft-law instruments have been adopted by the human rights bodies of the United Nations. For instance, Resolution 15 (1998) of the Sub-Commission on the Promotion and Protection of Human Rights (entitled "Women and the Right to Land, Property and Adequate Housing") stated that discrimination against women with respect to acquiring and securing land is a violation of human rights law, and urged governments to amend and/or repeal discriminatory laws and policies and to encourage the transformation of discriminatory customs and traditions (Paragraphs. 1 and 3).

Women hold primary responsibility for producing food, as well as for gathering the water and fuel used by their families. Rural women alone are responsible for half of the world's food production and between 60 and 80 percent of food production in most developing countries. Despite significant contribution of women in the economy, estimates by the United Nations indicate that women own only 1-2 percent of all titled land worldwide (Steinzor 2003). In south Asia, women are less likely to own and operate roughly 10-15 per cent of total land (FAO, 2011, Rao, 2006). These patterns place women at a strong disadvantage in terms of securing a place to live, maintaining resources for their livelihoods and, in many cases, basic survival. Development experts increasingly link

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women's lack of land and property rights to problems facing nations as a whole, in particular a lack of education, homelessness, hunger, poverty, and poor health (Steinzor, 2003). NGO and international agency representatives testified at the World Food Summit in June 2002 that ensuring women's land and property rights is essential to enabling them to better provide for their children, which would in turn help to mitigate world hunger (FAO 2002a). The lack of control over land by women stems from the long practiced gender discrimination worldwide. Bangladesh is not exception to this culture.

In some Central Asian states (e.g. Kyrgyz Republic and Uzbekistan), the holder of land rights is the household, and land titles are issued in the name of the household head (usually the eldest man). Therefore, women have access to land only through their husbands and/or male relatives (Giovarelli and Duncan, 1999).

In some predominantly Muslim countries (Pakistan and Bangladesh), Shari'a norms limiting women's inheritance rights (usually to half of men's share) are incorporated into statutory law (e.g. for Pakistan, the West Punjab Muslim Personal Law (Shariat) Application Act 1948) (FAO, 2002b).

In socialist countries, legislation granting farmers land use rights on state - or collectively owned land usually does not discriminate against women; however, entrenched customary norms and patriarchal culture constrain women's access to land (e.g. on Viet Nam, Hood, 2000).

Bangladeshi families remain strongly patriarchal, with the man recognized as the 'head of household by both state and market institutions. Land and other asset entitlements are generally issued to the head of the household. Women, constructed socially as dependent wives and mothers, are expected to obey and offer service to men and the family through their life cycle, and as long as they perform this role, their rights are protected. Divorced and separated women are most vulnerable, as lacking in male protection and supervision, they are seen as deviants, and denied their rights.

Women's participation in economic activities depends greatly upon their access to land because in a developing country like Bangladesh land is the main asset or productive resource of the rural people. Eve Crowley of the Land Tenure Service at FAO states that: "Poverty is inversely correlated with household land ownership. The landless are more vulnerable, especially in famines, and have higher infant mortality rates. Women and children suffer disproportionately from shocks when their rights to household resources, including land, are mediated through men. Direct access to land minimizes women's risk of impoverishment and improves the physical well-being and prospects for her children." (Crowley 2001).

Ensuring women's access to inheritance of land is one important way of establishing land right of rural women in Bangladesh. But struggles over land and other property often take place at the local level, within communities and families. In such a context, traditional customs and beliefs remain strong, which in turn often means that male-dominated systems are prevalent. In Bangladesh, for example, 89.52 percent of the population is Muslim (GOB 2008). Muslim law stipulates that daughters inherit half of the share of their male counterpart (sons) and, in the absence of a son, daughters can inherit only as a residuary (i.e., only after all debts and other obligations are settled). Wives inherit half the proportion of wealth as do husbands when a spouse dies. Similarly, Hindu law denies full inheritance rights to widows and daughters; there are no provisions for divorce, and fathers are viewed as the natural, legal guardians of children. The present study attempts to investigate the access of rural women in Bangladesh to patrimonial land and suggest recommendations to ensure access of rural women to patrimonial land.

Literature Review

Very few studies have been conducted on the access of women to patrimonial land in

Asian countries. However, a number of studies have been conducted on the issue in African countries. Agarwal (1994) has shown that women have benefited indirectly through land granted to their husbands and fathers but there are particular benefits that accrue only when women themselves are landowners. The advantage of land ownership for women include drastically enhanced security, increased and dependable income, ability to access credit and government programs and more leverage and respect within their households and community. Increases in women's income and assets have been shown to directly benefit their entire households, especially health, education and well-being of their children to a greater extent than if the benefits were granted to men alone.

Brown and Chowdhury (2002) has shown that there is a general awareness of the rights granted to widows, daughters and sisters under the written inheritance laws, but these rights are not frequently exercised. In many cases land is registered in sons' names before their father's death, specifically to prevent daughters, sisters and widows from claiming land rights.

Lastarria-Cornhiel (1997) shows that communal land tenure aims to provide equitable access to land for all but households in a community, women's land rights within customary land tenure regimes are often weaker than those of men.

Mwagiru (1998) studied women's land right in three African countries, namely Kenya, Sudan and Ethiopia. His study shows that in the customary laws of the ethnic communities of Kenya, women are granted access to land either through marriage or through inheritance. These customary rights to land do not necessarily entail rights to property. In any case, both types of rights have often been annihilated by conflicts. Thus, many women have, during reconstruction periods following conflicts, found themselves no longer with the land rights they used to enjoy. This loss of access to land has greatly reduced the possibilities of women whose economic activities are land based, and who, therefore, find themselves legally and economically disempowered.

The issue of women's land rights in Sudan is complex. Before the conflict began, these rights were regulated by customary law which ensured women's access to land and property by virtue of marriage. Otherwise, women could own land only in cases of direct inheritance from their parents or kin. However, because of the conflict, much of the land has never been subdivided, which has reduced the possibility of individual ownership by women. What renders the situation even more precarious for women is that their powerlessness with regard to land and property rights is reinforced by the Constitution of Sudan, which imposes Islamic tenets. These are overwhelmingly biased against women in matters of land property rights.

Ethiopia's Socialist Constitution (1975-91) emphasized the role of men as the guardians of the means of production, basically land. No place or role was practically left for women, which could only adversely affect their land and property rights. However, current Ethiopian constitution has recognized the right of women to land.

A study by UN High Commission for Refugees (1998) shows that Rwandan women's right to property is linked to the cultural situation of the country. Women have always been sidelined on matters of family or conjugal inheritance. Custom does not allow them to inherit parents' or husband's property, and to date there is no law on inheritance and marriage settlements to rectify this situation. According to custom, land rights are passed on from father to son in accordance with the principle of patrilineal succession. Daughters may inherit land, as a gift or where there is no son, but there is no automatic right of inheritance. Daughters thus cannot benefit by inheriting their father's land. Custom allows a surviving widow only usufruct rights on the property of her deceased husband, and she is allowed this only if she remains in the matrimonial home; otherwise she will be denied it by her in-laws.

Tekle (1998) has shown that Eritrean society is predominantly patrilineal and patrilocal in inheritance and residence patterns, which puts women in a subordinate position in relation

to men. The reasons for this gender inequality lie to a great extent in kinship and inheritance systems. Women's unequal status to that of men is seen most sharply in the private sphere of marriage. The roles which women play and which are not shared by men are regarded as inferior. Women's unequal status in marriage and the family is based on traditional, customary and religious attitudes that confine women to particular roles and place a higher premium on the male than the female. The situation in relation to owning land is that, generally, land is owned by men, not women; but a woman might own land if she is widowed, divorced, or, exceptionally, if she is an unmarried, but mature woman.

Steinzor (2003) shows that women own only an estimated 1-2 percent of all titled land worldwide and are frequently denied the right to inherit property. There are numerous cultural, social, political, and legal factors that influence women's lack of property and inheritance rights, and specific patterns of ownership and disenfranchisement vary widely. Lack of control over both productive and non-productive resources in both rural and urban settings places women at a strong disadvantage in terms of securing a place to live, maintaining a basis for survival, and accessing economic opportunities.

Yunxian (2010) has shown that Chinese families are disinclined to give daughters their share following marriage. Women find it difficult to legally prove and claim their marital share in the courts, especially in the event of marriage breakdown, given the perception that agricultural land 'belongs' to the male's side of the family.

Dube (1997) has shown that in Southeast Asia, Javanese, Malay Muslims, Catholic Filipinos and Buddhist Thai are all governed by bilateral kinship systems, wherein both parents provide identity to the child. Property is divided equally between sons and daughters, with no discrimination in the allocation of resources.

Most of the studies regarding land right of women is concerned with the countries of Africa. The study of women's inheritance land right in case of South Asian countries especially in Bangladesh is rare. In addition, most of the above mentioned studies focused mainly on the land right of women stated in the customary law or constitution. Women's access to inheritance of land in practice has not been studied. The present study will remove this lacuna of the previous studies and unfold the actual situation regarding the right of women to patrimonial land in Bangladesh.

Objectives of the Study

The main objective of this study is to investigate the access of rural women to patrimonial land. The specific objectives are:

- i) to investigate the awareness of rural women regarding their inheritance right to patrimonial land.
- ii) to investigate if the rural women get their proper share in patrimonial land.
- iii) to identify the factors (if any) responsible for not having access to patrimonial land
- iv) to suggest policy measures to establish women's right to patrimonial land.

Data and Methodology

The study is based on primary data. The study was conducted in two villages namely, Madhupur and Laxmipur under the Sadar Upazilla of Kushtia district. A total of 200 women, 100 from each of the villages, were randomly selected for data collection. Data was collected by face to face interview with the sample women. A pre-designed and pre-tested questionnaire was used for interviewing the women. Data analysis was performed with the aid of well-known statistical package SPSS. Result has been presented in tabular form with necessary graphs, charts etc.

Findings of the Study

Education level and occupation of the respondent women: The majority of sample women are illiterate (68%) of whom 28.5 percent completed primary education, only 2.5 percent completed secondary education and 1 percent completed graduation. Regarding occupation (95%) are housewives and only 5 percent are engaged in jobs.

Table 1: Education level of the respondent women

Education Level	No of Women	Percent	Occupation	No of Women	Percent
Illiterate	136	68.0	Housewife Job	190	95
Primary	57	28.5		10	5
Secondary	5	2.5			
Degree	7	1.0			
Total	200	100		200	100

Figure-1: Education level of the respondent women.

Rural women's access to patrimonial land: All the respondent women of the two villages are Muslim. According to Muslim family law a daughter is entitled to patrimonial land but only half of that of a son. This difference in treatment between men and women is justified by Islam because under Islamic law a wife is entitled to property of her husband in addition to maintenance from her husband, in terms of shelter, clothing, food and medical care. In other words women are compensated for their unequal inheritance shares through such material obligations on the part of husbands to their wives. But our present study shows a frustrating result. Out of 200 women only 53 (26.5%) got their shares to patrimonial land and the majority women 147 (73.5%) are deprived of their shares (Table-2 and Figure-2). Moreover, the women who got patrimonial land did not get their full shares. 53 women, who got their shares, got less than their due amount of patrimonial land. Table-3 shows that the amount of land received by respondent women, in practice, ranges from 6 percent to 76 percent of actual amount they are entitled for. It is very frustrating that not a single woman got full share of patrimonial land she deserves. Nearly 87 percent women got 6 percent to 50 percent of their shares and only 13 percent got 60 percent to 76 percent of their shares to patrimonial land. This figure reveals the degree of deprivation of the rural women from their right to acquire patrimonial land.

Reasons for not getting patrimonial land: The sample women were asked why they did not get patrimonial land. The responses reveal that the majority of the women (27.21%) were deprived of patrimonial land because their brothers appropriated their share. The second highest number of women (23.81%) informed that they did not claim their shares to patrimonial land lest it destroys the relationship with their brothers. The third highest number of women (17%) did not claim willingly and 16.32% did not know about their share to patrimonial land. A number of women (10.21%) did not claim patrimonial land because their brothers are very poor and about 6 percent of women did not claim because their father sold land to meet the expenses of their marriages (Table-4 and Figure-3).

Table-2: Distribution of women according to patrimonial land received

Category	No. of women	Percent
Have got father's land	53	26.5
Have not got father's land	147	73.5
Total	200	100

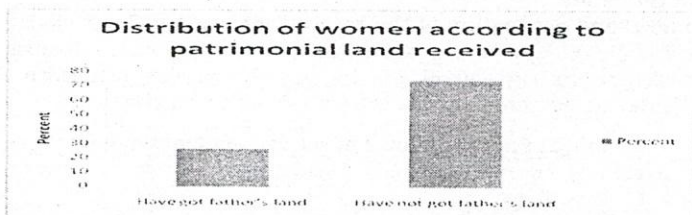


Figure 2: Distribution of women according patrimonial land received

Table 3: Distribution of women according to amount of land due and actual amount they received

Amount of land due (in acre)	Amount of land received (in acre)	Due amount of land (in acre)	No. of Women	Percent
0.1	.01	10	10	18.87
0.1	.02	20	3	5.66
0.5	.03	6	6	11.32
0.4	.05	12.5	2	3.77
0.5	.07	14	2	3.77
0.3	.08	26.67	5	9.43
0.6	.10	16.67	2	3.77
0.4	.13	32.5	2	3.77
0.5	.16	32	3	5.66
0.5	.20	40	2	3.77
0.6	.30	50	6	11.32
0.7	.33	47.14	3	5.66
0.9	.58	64.44	3	5.66
1.0	.76	76	2	3.77
1.5	1.10	73.33	2	3.77
Total			53	100

Table 4: Reasons for not getting patrimonial land

Reasons	No. of women	Percent
Did not claim because of lack of awareness	24	16.32
They claimed but brothers appropriated	40	27.21
Did not claim willingly	25	17.01
Did not claim lest it destroy the relationship with brothers	35	23.81
Did not claim because brothers are poor	15	10.21
Did not claim because father sold land at their marriage	8	5.44
Total	147	100

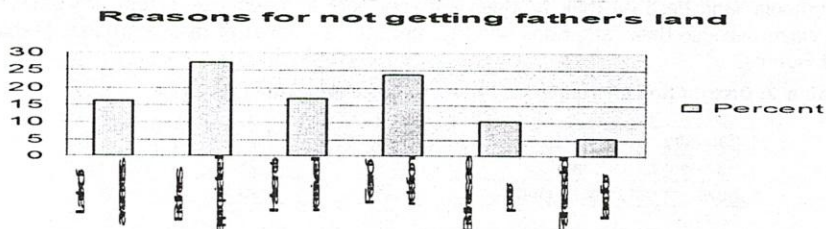


Figure 4: Reasons for not getting father's land

Behavior of brothers when land was claimed: After the death of father in a family, brothers generally look after the land and other family property. The women have the right to receive their share to patrimonial land soon after the death of their father. The brothers should arrange to transfer the due land to the sisters as soon as they claim their shares. However, 27.21 percent women (Table-4) informed that brothers had appropriated their share in patrimonial land. Therefore, appropriation of sister's share in patrimonial land by the brothers is one of the main hindrances in the way of establishing right of rural women to patrimonial land. Table-5 and Figure-4 show that when women claimed their share in patrimonial land, brothers' behavior was normal in 25.81 percent cases, evasive in 39.78 percent cases and angry in 34.41 percent cases.

Table 5: Behavior of brothers when land was claimed

Behavior	Frequency	Percent
Normal	24	25.81
Evasive	37	39.78
Angry	32	34.41
Total	93	100

Behavior of brothers Right when land was demanded

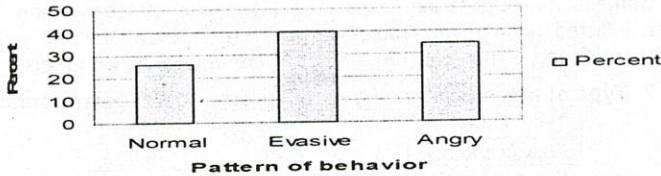


Figure 4: Brother's behavior when land was claimed.

Behavior of brothers after patrimonial land was realized: Brothers do not take it easy to give patrimonial land to their sisters. The realization of patrimonial land by rural women destroys the normal relationship between the brothers and sisters. Table-6 and Figure-5 show that brothers' behavior to the sample women was normal in 26.41 percent cases, bad in 39.62 percent cases and very bad in about 33.97 percent cases after they have received patrimonial land. The study reveals the greedy mentality of the brothers.

Table-6: Brother's behavior after receiving share in patrimonial land by the women

Behavior	Frequency	Percent
Normal	14	26.41
Bad	21	39.62
Very bad	18	33.97
Total	53	100

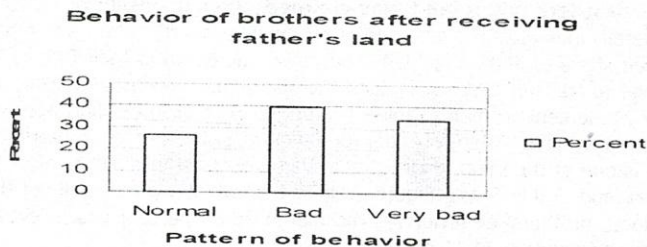


Figure 5: Behavior of brothers after receiving patrimonial land by the women.

Type of attempt made by rural women to get patrimonial land: We learnt from table-3 that out of 200 rural women 53 got patrimonial land although they got less than their actual share and 147 women did not get their share because of a number of reasons. From table-4 we learnt that 40 women informed that they claimed but their brothers appropriated their share. Therefore, it is needed to know what type of attempt they made to realize their share in patrimonial land. Table-7 and figure-6 reveal that 70 percent women tried to convince or request their brothers, 22.5 percent resorted to social mitigation and only 7.5 percent took legal action to get their share in patrimonial land. The respondent women were also asked about the awareness of legal action against the discrimination inflicted upon them. Table-8 and Figure-7 reveal that 66 percent (132) women are aware of and 44 percent (68) are not aware of legal action in this regard.

Table 7: Type of attempt made by rural women to get patrimonial land

Type of attempt	Frequency	Percent
Convince/Request	28	70.0
Social mitigation	9	22.5
Legal action	03	7.5
Total	40	100

Table 8: Distribution of women according to awareness of legal action regarding patrimonial land.

Awareness of legal action	No of Women	Percent
Aware	132	66
Not aware	68	34
Total	200	100

Opinion of the respondent women to establish women's right to patrimonial land: All the respondent women were asked to provide their suggestion as to what measures should be undertaken so that women get their share in patrimonial land. The majority of the women (26.5 %) opined that it is important to develop awareness among the men and women, 16.5 percent seek government interference, 15.5 percent are in favor of enactment of stern law, 7 percent want fathers to settle this issue before death and 10 percent emphasize on changing the mentality of brothers. On the contrary, 10 percent women think that women should not claim father's land and 14.5 percent did not give any opinion (see Table-9 and Figure-8).

Table 9: Opinion of the respondent women to establish their right to patrimonial land

Opinion	Frequency	Percent
Awareness build up	53	26.5
Government interference	33	16.5
Change the mentality of brothers	20	10.0
Enactment of stern law	31	15.5
Father should arrange before death	14	7.0
No need to receive father's land	20	10.0
No comment	29	14.5
Total	200	100

Conclusion and Recommendations

The study shows that although women's right to patrimonial land is recognized in state law, in practice women's access to patrimonial land have so far remained mainly illusory rather than substantive. Therefore, the majority of women have not been able to enjoy their right to patrimonial land. Lack of access or limited access to patrimonial land is a serious violation of human right and it also prevents the rural women from being economically solvent. Half of our total population is women and it is not possible to augment the economic development of the country without ensuring their lawful right to land and property. Establishing women's access to patrimonial land is one important way to ensure women's empowerment in the society. The following recommendations are suggested to ensure the access of rural women to patrimonial land.

Developing Awareness: There is still a serious lack of gender and human rights awareness among men and women. This study informs that a large number of men deny the right of women in patrimonial land. In addition, many women do not have information, confidence, experience and resources to obtain what they are legally entitled to. In our study, more than sixteen percent rural women informed that they did not claim their share in patrimonial land because of the lack of awareness about their right. Therefore, attempts should be made by the government to develop awareness among the rural men and women about the lawful right of women to patrimonial land. Changing the mentality of men about the right of women to patrimonial land is essential for establishing the land right of women in this patrimonial society. Non-governmental organizations (NGOs) can also be engaged in this venture.

Enactment of Stern Law and its Implementation: The study reveals that above thirty three percent women demand government intervention and thirty one percent women demand enactment of stern law to establish women's access to patrimonial land. The government should make arrangements to ensure that women get their proper share of patrimonial land as per law. The union council authority may be entitled to settle the issue properly. The government may formulate a law requiring that the chairman of every union council will settle the land distribution among the brothers and sisters within one year after the death of father of a family. At the same time, stern action should be taken against the persons engaged in depriving the women from their proper share in patrimonial land. Since women are vulnerable group of the society, without government interference they will not be able to realize their right to patrimonial land.

Implementation of Anti-dowry Law: The payment of dowry or bride money is often considered as the daughter's share of the family assets and is the apparent justification of why daughters should not inherit land and other family assets. The practice has very strong roots. The common perception is that payment of dowry or bride money ensures the security of the daughter and that without such payment a daughter may not get married and will remain a burden on her family. This is the case in Indian sub continent, where families may be happy to pay dowry in hopes that their daughters will be well cared for.

In the present study, about six percent women said that they did not claim father's land because their fathers sold land to meet the expenses of their marriages including dowry. This is inhuman practice against women. The government should take stern action against dowry and at the same time promulgate law requiring that any kind of marriage related expenses will not be accepted as substitute of women's share to patrimonial land. Women must get their proper share in patrimonial land as per law irrespective of their expenses regarding marriage.

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**A STUDY OF THE EFFECTIVENESS OF KOREA'S TECHNICAL
COOPERATION TO FACILITATE CAPACITY BUILDING
OF THE GOVERNMENT OFFICIALS OF BANGLADESH**

Md. Roknuzzaman Siddiky*

Abstract: The paper attempts to examine the effectiveness of Korea's technical cooperation (TC) in the form of trainings to facilitate capacity building of the government officials of Bangladesh. To examine the effectiveness of Korea's TC to facilitate capacity building of the government officials of Bangladesh, two forms of KOICA's trainings involving short-term training and long-term training (KOICA Master's Degree Program) were evaluated. In this regard, some hypotheses were tested in order to determine whether the effectiveness of trainings varies significantly depending on its types or across the topics of training. The study suggests that KOICA's trainings as a whole are effective for the government officials of Bangladesh to develop their Knowledge, skills and abilities (KSAs) while the effectiveness of training has varied significantly depending on the type of training and across the topics of training. The study also shows that long-term training is approximately very effective while short-term training is moderately effective to enhance management & technical capacity of the government officials of Bangladesh. As a whole, KOICA's trainings are effective to enhance management & technical capacity of the governmental officials. However, both the trainings are moderately effective to benefit the government organizations of Bangladesh. Hence, supportive policy should be undertaken to maximize the benefits from TC in the form of trainings.

Key Words: The LDCs, ODA, Korea's bilateral ODA, KOICA, technical cooperation (TC), short-term training, long-term training, capacity building etc.

Introduction

The developing countries, specifically the least developed countries (LDCs) are facing critical challenges and impediments on account of their shortage of technical know-how and low level of technological development (UNCTAD, 2007; UNDP & UN-OHRLLS, 2008). The LDCs have weak human, institutional and productive capacities (United Nations, 2001; UNCTAD, 2006). The LDCs are also facing significant challenges in building state capacity, in particular, in formulating and implementing sound public policies and establishing good governance and thereby hinder their sustainable development and economic growth. The lack of capacity in government and supporting institutions is a great stumbling block for the LDCs to maximize the benefits from globalization (UNDP & UN-OHRLLS, 2008). Therefore, to bridge their knowledge and technological gaps and to facilitate their human and institutional capacity building, international development cooperation, particularly technical cooperation (TC) can be pivotal for the LDCs. Hence, as an LDC, Bangladesh

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essentially requires TC in order to facilitate capacity building at human and institutional level in the public sector of Bangladesh.

While TC is assumed to be a catalyst of socio-economic development of the developing countries, especially the LDCs, there has been a growing criticism with regard to its effectiveness to promote human and institutional capacity building. In the light of some developing countries' experiences to utilize TC, many development thinkers and scholars have advocated that TC does not have much positive impact on raising capacity building in the developing countries¹ and it often undermines local capacity (Arndt, 2000; Denning, 2002; Morgan & Baser, 1993; Morgan, 2002; Fukuda-Parr, Lopez & Malik, 2002; Malik, 2002; Browne, 2002; JICA, 2003; Whyte, 2004; OECD, 2006). JICA (2003), for example, pointed out that the effectiveness of TC has been controversial to fill up the knowledge gap in developing countries and it performed least favorably in institutional capacity building of the developing countries. Whyte (2004), on the other hand, argued that almost a quarter of overseas development assistance focuses on capacity building, mainly through technical assistance. Nevertheless, development outcomes are still falling short of expectations, especially in Africa. However, due to lack of adequate empirical studies, the effectiveness of Korea's TC programs toward the developing countries, in particular, in the context of Bangladesh to facilitate human and institutional capacity building in the public sector has come into question. Therefore, the study was intended to examine the effectiveness of Korea's TC in the capacity building of the developing countries while the focus was given on the assessment of the effectiveness of KOICA's training programs to facilitate capacity building of the government officials in the public sector of Bangladesh.

Defining Technical Cooperation (TC)

Technical cooperation (TC) is recognized as an important component of international development cooperation, often called official development assistance or ODA which is defined as the flows of official financing administered with the intention of promoting economic development and welfare of the developing countries and which are concessional in character with a grant element of at least 25% (Degnbol-Martin & Engberg-Pederson, 2003; OECD, 2006a & 2008). In addition to financial flows, TC is included in ODA. The OECD's Development Assistance Committee (OECD, 2008) provided the broader definition of TC which is usually followed by its member-countries to administer their development cooperation² while the nature or forms of TC could vary from one member country to another depending on their comparative advantage and development cooperation policies. The forms of TC usually encompass the transfer of knowledge, skills or expertise, sharing development experience, provision of training and scholarship and such other technical assistance to the developing countries to boost up their human and institutional capacity building (Arndt, 2000; OECD, 2006a, 2008; UNDP, 2009).

However, technical cooperation (TC) and technical assistance (TA) are sometimes synonymous with each other and are used interchangeably³ (DFID, 2006; Arndt, 2000). TA

¹ Denning (2002) pointed out that TC is large in size, at US \$ 14.3 billion a year, but small in impact. It produces notoriously disappointing progress towards its ostensible objectives of sharing knowledge and building capacity.

² Technical cooperation defined by the OECD (2008) involves (a) grants to nationals of aid recipient countries receiving training at home or abroad, (b) payments to consultants, advisers and similar personnel as well as teachers and administrators serving in recipient countries (including the cost of associated equipment).

³ The notion of technical cooperation is popularly used by most of the bilateral donor agencies of the OECD's DAC member-countries instead of technical assistance while technical assistance is

has been defined by Riddell (2007) as the provision of skills, knowledge, know-how, and advice to the developing countries. Therefore, TC may be similar to those flows concerned with TA. However, TC is preferably used by most of the OECD's DAC member-countries and is administered through their official bilateral organizations such as KOICA, JICA, DANIDA, DFID, and so on (UNESCO-UNEVOC, 2004). As an official bilateral development agency of the Republic of Korea, Korea International Cooperation Agency (KOICA) has been implementing grant aid and technical cooperation programs under the Ministry of Foreign Affairs and Trade, namely MOFAT (KOICA, 2006a, 2006b). KOICA's TC programs include training, expertise sharing, Korea Overseas Volunteers (KOVs), and development studies (KOICA, 2001, 2006b).

Conceptual Foundations of Capacity Building

Capacity building is a major building block of the overall efforts to achieve the goals of poverty eradication, economic growth and sustainable development, and to devote more attention and resources to strengthening the national capacities necessary to make progress in achieving millennium development goals. It has been central to United Nations operational activities which are aimed not only to support the developing countries to achieve millennium development goals but also to support them to develop their own capacities effectively (ECOSCO, 2002). Thus, capacity building has been one of the major critical issues largely being focused by the international development organizations including various bilateral agencies to facilitate economic and social development of the developing world; in particular, the least developed countries. CIDA (1996) defines capacity building as a process by which individuals, groups, institutions, organizations and societies enhance their abilities to identify and meet development challenges in a sustainable manner. Morgan (1999) defines capacity building as the ability of individuals, groups, institutions and organizations to identify and solve development problems overtime (as cited in Universalis, 1999). However, UNESCO (2006) suggests that capacity building, in a broad sense, involves the following aspects:

Human resource development: the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively.

Organizational development: the elaboration of management structures, processes and procedures, not only within organization, but also the management of relationships between the different organizations and sectors (public, private and community).

Institutional and legal framework development: making legal and regulatory changes to enable organizations, institutions and agencies at all levels, and in all sectors, to enhance their capacities" (p. 2).

Capacity building, therefore, involves human resource capacity building as well as organizational or institutional capacity building. Human resource capacity building involves a series of activities such as knowledge and skills development, education and training, attitude change, participation in decision-making and so on while institutional capacity building involves institutional strengthening or organizational effectiveness. Through capacity building, individuals and groups are empowered to expand their abilities to more fully participate in the development process (Crowder, 1996).

However, the OECD (2008, p. 62) defines capacity building as the "means by which skills, experience, technical and management capacity are developed within an organizational structure – often through the provision of technical assistance, short/long-term training and specialist inputs (e.g. computer systems). The process may involve the development of human, material and financial resources." Based on the OECD's definition, 'capacity

used by some multilateral institutions including the ADB, World Bank (WB) and the World Trade Organization (WTO).

building' may be conceived as the processes or means by which knowledge, skills and abilities, or technical and management capacities are developed within an organizational context through the provision of technical assistance or several overseas invitational training and scholarship programs. However, capacity building may also take place at societal or national level. Hence, capacity building may be understood as the process of building human, institutional and organizational or societal or national capabilities leading to sustainable development and economic and societal well-being of a country. However, recently UNDP and OECD along with some other international organizations are willing to use the notion of capacity development (CD) replacing capacity building (OECD, 2006b; UNDP, 2008).

Link between TC and Capacity Building

TC in the form of training and other such assistance is instrumental to support human and institutional capacity building. A number of bilateral organizations such as JICA, KOICA, and DFID as well as such multilateral organizations and UN bodies as ADB, WB and UNESCO have been providing their development assistance or technical cooperation programs to the developing countries in the form of training and scholarship to support capacity building at individual and institutional levels focusing on diverse issues of development for their government officials. These trainings in principal aim at building human, institutional and organizational capacities in the public sector of the developing countries, especially the LDCs. The process involves development of knowledge and skills and enhancement of management and technical capacity of their public officials so that they could contribute to their respective organizations for sound policy-making, organizational planning, policy analysis, and so on within an organizational structure. In this way, TC can support capacity building not only at individual level but also at institutional level in the public sector of the developing countries. Hence, there is a close relationship between TC and capacity building.

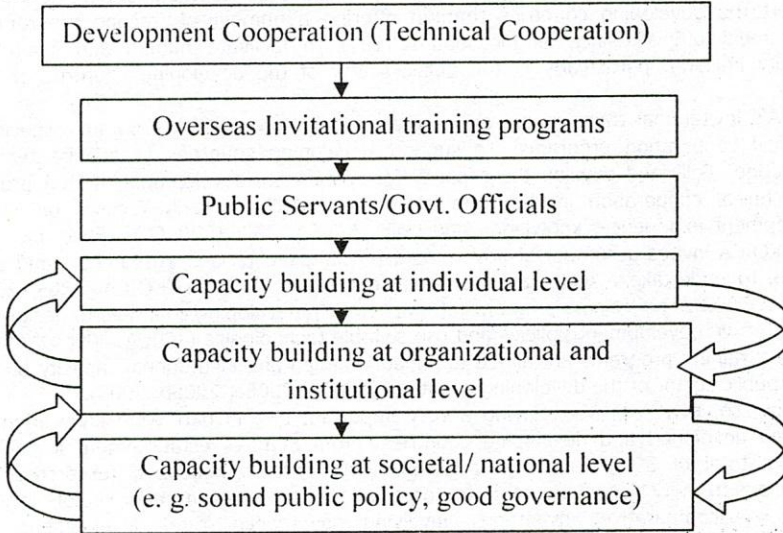
Capacity building may occur at individual level, as the government officials could develop their knowledge and skills and build up problem-solving abilities through participating in various overseas invitational training programs. Capacity building may occur at organizational or institutional level⁴ since they might develop management and technical capacities in line with their organizational needs and priorities through participating in such training programs that could allow them to perform their assigned duties efficiently, set out organizational strategy, carry out development plans, assess organizational needs, deal with organizational management, facilitate sound decision-making and thereby enhance organizational performance or effectiveness.

However, capacity building may also occur at societal or national level when the public servants could harness their expertise- a blend of knowledge, skills or management and technical capacity- in national planning, decision-making, policy analysis, formulating and implementing public policy, and establishing good governance, and so on. Capacity building at societal or national level not only incorporates capacity building at public sector but also at private sector, business firms and social organizations. It lays foundations for building capacities at individual and organizational levels. Hence, it is very crucial for creating an enabling environment that can facilitate economic and societal-wellbeing of a

⁴ Capacity building at the organizational level will determine how the individual capacities are utilized and strengthened. It influences an organization's performance, and involves capacities of individuals in the organization, organizational strategy, strategic planning, management, problem-solving skills, decision-making process and the like (UNESCO-IICBA, 2006).

developing country.⁵ Capacity building through TC in the form of training may be viewed as a systematic approach since all these three levels may reinforce or support each other. However, training is only one component of TC. Its effectiveness mostly depends on its alignment with the needs of the trainees and organization as a whole while supportive government policy is also needed. Capacity building as a systematic approach through TC can be illustrated as follows:

A Systematic Approach of Capacity Building through TC:



Implications of Capacity Building in the Public Sector of Bangladesh

Over time, people's demands for services from their governments have increased. In order to respond to such demands, the public sector must depend on the quality of its human resources. It is essential, therefore, to improve and upgrade the capacity or ability of human resources in the public sector since this will determine the character and effectiveness of an administrative system (United Nations, 1995). Moreover, the efficacy of a government mostly relies on how efficiently it utilizes its human resources associated with its various organs – political, economic, administrative and otherwise – to manage a country's economic and social resources and public affairs. Efficient and skilled public servants serve as the key component of efficient bureaucracy and good governance in a country and they are responsible for designing development programs and formulating or implementing policy. Hence, a country must make sure that its public servants are skilled and efficient enough to deal with its public affairs and policy matters fruitfully and thereby stepping up its socio-economic development. Thus, to make the public servants or government officials efficient and skilled, and to establish good governance, human and institutional capacity building in the public sector of the developing countries, in particular, of the LDCs has been a critical issue (United Nations, 1995, 2001; UN-OHRLS & UNDP, 2006).

Role of KOICA to Facilitate Capacity Building in the Public Sector of the Developing Countries with Special Reference to Bangladesh

⁵Capacity building at societal or national level may be viewed as capacity building at the environmental level which refers to the environment and conditions necessary for demonstrating capacity at individual and organizational level (as cited in UNESCO-IICBA, 2006, p. 5).

Human resources development (HRD) has been a key factor behind the success of Korea's economic development (Kim, 2004; Kim, 2005; Freeman & Kim, 2008; KOICA, 2008). Korea was a country where natural resources were scarce and investment capital was lacking. It was through the expansion of and upgrading of human resources that Korea was able to get rid of vicious circle of poverty and underdevelopment. Korea, therefore, exemplifies a powerful model of how capacity building through HRD can trigger the development process forward (KOICA, 2008). Therefore, KOICA has been striving to support the developing countries through offering a number of training programs for government officials since its inception in 1991 to facilitate human and institutional capacity building, particularly in the public sector of the developing countries (KOICA, 2008).

KOICA's invitational trainings are an integral part of Korea's ODA programs, specifically technical cooperation programs. To support developing countries to acquire technical knowledge, skills and develop the capacity for sustainable development, KOICA provides its technical cooperation in the form of training which primarily focuses on Korea's development experience, knowledge and skills (KOICA, 2006a, 2006b). Each and every year, KOICA invites a number of government officials, technicians, researchers and policy makers to undertake a wide range of training courses in Korea (KOICA, 2005, 2006a, 2006b & 2008). The training programs attempt to help developing countries to design their own effective development policies and use suitable technologies (KOICA, 2006b). As such, KOICA's training programs are aimed to support human and institutional capacity building in the public sector of the developing countries (KOICA, 2006a, 2006b, 2008).

By doing so, KOICA is also playing a very important role in narrowing knowledge gap between developed and developing countries. From KOICA's establishment in 1991 to 2010, a total of 39,962 persons including public officials, teachers, researchers and technicians from 171 countries came to Korea for training in seven major sectors in which Korea has comparative advantages, involving governance, rural development, ICT, industry & energy (KOICA, 2011, p.116). However, KOICA offers five major types of training programs such as country training program, regular training program, special training program, joint training program, and scholarship program (KOICA, 2006a, 2006b & 2008). These five major types of trainings can be grouped into two main categories: short-term training, and long-term training which denotes KOICA Master's degree course. The government officials or public servants are the key actors of promoting economic and social development in a country and formulating and implementing its development policy. Hence, KOICA has administered its TC programs to facilitate capacity building of the government officials of Bangladesh. Since its inception in 1991, KOICA has provided a variety of invitational training programs, and KOICA scholarships for pursuing Master's degree in Korean universities on relevant contemporary development issues relating to environment, governance, ICT, rural development, agriculture & fisheries, health, disaster prevention & management and so on for the government officials of Bangladesh. About 17 government officials received KOICA scholarship from 1991 to 2010, to attend Master's degree programs in Korea while 1137 government officials received various invitational short-term trainings in Korea during the period through KOICA (Sulim Hwang, KOICA Head Office, personal communication, August 5, 2011). In this way, KOICA's TC has been supporting capacity building in the public sector of Bangladesh. However, there was a lack of empirical studies about the effectiveness of KOICA's TC in the form of training to facilitate human and institutional capacity building in the public sector of Bangladesh.

Methodology of the Study

The present study was mainly an evaluative study in nature, for which the data were generated from the fieldwork conducted by the researcher himself from June, 2011 to August, 2011 as part of his research project for PhD Program. To evaluate the

effectiveness of Korea's technical cooperation to facilitate capacity building of the government officials of Bangladesh, two forms of KOICA's training involving short-term and long-term training programs (KOICA Master's Degree Program) were examined. A total of 21 government officials undertaking short-term or long-term training in Korea as part of its technical cooperation through KOICA were sampled from such governmental bodies (or the ministries) of Bangladesh as ERD, Ministry of Finance, Ministry of Commerce, Ministry of Science and ICT, Ministry of Education, Ministry of Environment & Forest, and the like based on purposive sampling⁶ procedure and the samples were interviewed by using structured-interview schedule⁷ taking into consideration both closed-ended and open-ended questions. In this case, the researcher deliberately employed purposive sampling due to his time constraints, and convenience for conducting interviews since the KOICA's trainees were scattered across the country. Basically, the trainees those who were available in Dhaka city, were sampled so that the researcher could easily locate them and carry out face to face interviews.

Out of 1137 trainees undertaking various short-term trainings, and of 17 trainees undertaking various long-term trainings, 15 and 06 were purposively selected respectively for this study. As such, the responses of the two groups of government officials, of which one group undertaking short-term training and other group undertaking long-term training in Korea were compared and analyzed.⁸ **5-point Likert-type scale**⁹ was used to measure the effectiveness of KOICA's trainings to facilitate their capacity building. The paper also attempts to find out the extent to which KOICA's trainings have been effective to benefit the aforesaid government bodies of Bangladesh leading to their institutional capacity building by using Likert-type scales.

To find out the reliability or internal consistency of the items of the measurement, the Cronbach's alpha was carried out. The Cronbach's alpha Coefficient was .806 indicating that the items of scales in the measurement are reliable. Some hypotheses were reasonably tested by using nonparametric tools of hypothesis testing, often called non-parametric statistics,¹⁰ so as to determine whether the effectiveness of KOICA's trainings varies significantly depending on the type and topics or subject-matters of training. The

⁶ The study employed purposive sampling, often called the judgmental sampling, is a type of non-probability sampling in which the units to be observed are selected on the basis of the researcher's judgment about which ones will be the most useful or representative (Babbie, 2007, p. 184).

⁷ In structured-interviewing, all respondents are asked the same questions in the same order and are compared using a common rating scale (US Office of Personnel Management, 2008). However, in this study, structured questions were supplemented by open-ended questions to gather more information. Hence, the structured-interview schedule employed in the study involved both closed-ended and open-ended questions.

⁸ It is noteworthy to mention that the views of the respondents do not represent the official position of the Government of the People's Republic of Bangladesh. The respondents' views should be treated as their own derived from their personal experience to participate in trainings offered by KOICA.

⁹ 5-point Likert-type scale was defined from lowest to the highest degree of effectiveness where 1 = 'not at all effective', 2 = 'not effective', 3 = 'somewhat or moderate effective', 4 = 'effective', and 5 = 'very effective'. San Jose State University (2011) carried out a study aiming to examine the Student Opinion of Teaching Effectiveness (SOTE) by using 5-point Likert-type scale from lowest to the highest degree of effectiveness.

¹⁰ Nana & Swailowsky (1993) point out that nonparametric statistics are more appropriate for analyses involving Likert scale (as cited in G. W. Corder & D. I. Foreman, 2009, p.5); Gibbons (1993) suggests that classical statistical methods are strictly valid only for data measured on at least an interval scale. However, nonparametric statistics involves the methods which are particularly appropriate for ordinal scale measurements like Likert scales.

nonparametric tools of hypotheses testing employed in the study involved **Chi-square (χ^2) test**,¹¹ **Mann-Whitney-U-test**,¹² and **Kruskal-Wallis H-test**.¹³ The study seeks to validate the following hypotheses:

Table 1: Research and Null Hypotheses

S L #	Research Hypotheses (H_a)	Null Hypotheses (H_0)	Testing Tools
01	There is a significant association between type of training undertaken and the effectiveness of the training to develop knowledge, skills and abilities (KSAs) of the government official of Bangladesh.	There is no association between type of training undertaken and the effectiveness of the training to develop knowledge, skills and abilities (KSAs) of the government officials of Bangladesh.	Ch-Square (χ^2) test
02	Long-term training is more likely to be effective to develop knowledge, skills and abilities (KSAs) of the government official of Bangladesh.	Effectiveness of training to develop KSAs of the government officials does not vary significantly depending on the type of training.	Mann-Whitney – U-test
03	Effectiveness of training to develop KSAs of the government officials significantly varies depending on the topics or subject-matters of training.	Effectiveness of training does not vary significantly to develop KSAs of the government officials depending on the topics or subject-matters of training.	Kruskal-Wallis–H-test
04	There is a significant association between type of training undertaken and the effectiveness of the training to enhance management & technical capacity of the government officials of Bangladesh.	There is no association between type of training undertaken and the effectiveness of the training to enhance management & technical capacity of the government officials of Bangladesh.	Ch-Square(χ^2) test
05	Long-term training is more likely to be effective to enhance management & technical capacity of the government officials of Bangladesh.	Effectiveness of training does not vary significantly to enhance management & technical capacity of the government officials depending on the type of training.	Mann-Whitney – U-test
06	Effectiveness of training to enhance management & technical capacity of the government officials varies	Effectiveness of training to enhance management & technical capacity of the government officials does not	Kruskal-Wallis – H-test

¹¹ As a nonparametric test, Chi-square (χ^2) test can be used to determine whether there is a statistical significance between two categorical attributes (Kothari, 1990; Corder & Foreman, 2009). Babbie (2007) points out that the Chi-square (χ^2) is based on the null hypothesis that there is no relationship between two variables in the total population.

¹² The Mann-Whitney U-test is a nonparametric statistical procedure for comparing two samples that are independent, or not related. The Mann-Whitney U-test is equivalent to t-test for independent samples of parametric statistics (Corder & Foreman, 2009, p. 57).

¹³ The Kruskal-Wallis H-test is a nonparametric statistical procedure used to compare more than two samples that are independent, or not related. The parametric equivalent to this test is one-way analysis of variance or ANOVA (ibid, P.100).

	significantly depending on the topics or subject-matters of training.	vary significantly depending on the topics or subject-matters of training.	
07	Long-term training is more likely to be effective to benefit the government organizations of Bangladesh.	Effectiveness of training does not vary significantly to benefit the government organizations of Bangladesh.	Mann-Whitney – U

Evaluation Summary of KOICA's Trainings

The study found that KOICA's trainings are effective for the government officials of Bangladesh to develop their knowledge, skills and abilities (KSAs) with a median value of 4.00 on a 5-point Likert-type scale while the effectiveness of training has varied depending on the type of training. The research finding reveals that long-term training, that is, KOICA Master's degree program is very effective with a median value of 5.00 while short-term training is effective with a median value of 4.00 to develop KSAs of the government officials of Bangladesh. In this regard, the empirical evidence of the study has supported three research hypotheses (H_a) as shown below:

First, there is a significant association between type of training undertaken and the effectiveness of the training to develop knowledge, skills and abilities (KSAs) of the government officials [$\chi^2 = 21.000$, **P-value (.000) < 0.01**]. **Second**, long-term training is more likely to be effective to develop knowledge, skills and abilities of the government officials than short-term training in Korea [**Mann-Whitney-U = .000**, **P-value (.000) < 0.01**]. **Third**, effectiveness of training to develop KSAs of the government varies significantly depending on the topics or subject-matters of the training [**Kruskal-Wallis (H) = 17.794**, **P-value (.013) < 0.05**].

The study shows that long-term training is approximately very effective with a median value of 4.50 while short-term training is moderately effective with a median value of 3.00 on a 5-point Likert-type scale to develop the management & technical capacity of the government officials of Bangladesh. However, as a whole, KOICA's trainings may be considered effective with a median value of 4.00 to enhance management & technical capacity of the government officials of Bangladesh. In this regard, the empirical evidence has supported three research hypotheses (H_a) as follows:

First, there is a significant association between type of training undertaken and the enhancement of management & technical capacity of the government officials [$\chi^2 = 8.137$, **P-value (.043) < 0.05**]. **Second**, long-term training is more likely to be effective than short-term training to enhance management & technical capacity of the government officials of Bangladesh [**Mann-Whitney-U = 12.000**, **P-value (.004) < 0.01**]. **Third**, effectiveness of training to enhance management & technical capacity of the government officials of Bangladesh varies significantly depending on the topics or subject-matters of training [**Kruskal-Wallis (H) = 15.239**, **P-value (.033) < 0.05**].

The study revealed that the government officials of Bangladesh have developed many skills and management capacities such as *analytical ability, policy analysis skills, negotiation skills, planning and policy making skills, policy formulation and implementation skills, decision-making skills, project assessment skills, especially assessment of the projects from the environmental point of view*, and so on from participating in various training programs offered by KOICA. However, based on the mean differences, the subjects or topics such as Public Policy, Environment/ Sustainable development and International Studies (Women and Dev.) and Institutional capacity building /E-government are more likely to be effective to develop management & technical capacity of the government officials of Bangladesh.

However, the study found that both short-term and long-term training programs have been moderately effective with a combined median value of 3.00 to benefit the concerned

governmental bodies (or the ministries) of Bangladesh leading to their institutional capacity building. In this connection, the empirical evidence has failed to support **research hypothesis (H_a)** that long-term training is more likely to be effective to benefit the government organizations such as the ministries of Bangladesh [**Mann-Whitney-U = 41.000, P-value (.395) > 0.05**]. The study identified five key reasons as to why KOICA's trainings have not been very effective to contribute to various government organizations in Bangladesh. These were: **first**, little scope or opportunity to apply the acquired expertise in line with service; **second**, in some cases, topics of training has no connection with job responsibilities; **third**, frequent transition or rotation of the government officials from one level to another; **fourth**, lack of proper policy; and **fifth**, KOICA's trainings are mainly Korea-based and sometimes difficult to apply in Bangladesh. However, the study found that even though some topics of training such as environment/sustainable development and Institutional capacity building/E-government were short-term trainings, they were more likely to be effective compared to long-term training to contribute to government organizations of Bangladesh. The empirical evidence indicated that their effectiveness was mainly attributed to proper alignment or consistency between the topics of training and the job responsibilities of the government officials. Moreover, the study revealed that the short-term trainings are not so comprehensive. They are basically theory oriented, rather than practical. Short-term trainings have also been criticized for focusing only on Korea rather than taking into account comparative analysis of a number of developed and developing countries. On the contrary, long-term training has been criticized for not having any PhD program, and internship both in Korea and abroad.

[Table: 2] Evaluation Summary

Rating Indexes	Forms of Technical Cooperation (training)	Group Median Value	Group Rating	Combined Median Value	Std. Deviation	Combined Rating	Highest Value in the Scale
The extent to which KOICA's trainings have been effective to develop knowledge, skills and abilities (KSAs) of the government officials.	Short-term training	4.00	Effective	4.00	.700	Effective	5.00
	Long-term training	5.00	Very effective				
The extent to which KOICA's trainings have been effective to enhance management & technical capacity of the government officials.	Short-term training	3.00	Moderately effective	4.00	.845	Effective	5.00
	Long-term training	4.50	Almost very effective				

The extent to which KOICA's trainings have been effective to benefit the government organizations of Bangladesh (leading to their institutional capacity building)	Short-term training	3.00	Moderately effective	3.00	.625	Moderately effective	5.00
	Long-term training	3.00	Moderately effective				

Table 3: Results of Hypotheses Testing

SL #	Research Hypotheses	Statistical Test	Obtained/ Calculated Value	P- Value	Alpha Level	Statistical Significance
01	There is a significant association between type of training undertaken and the effectiveness of the training to develop knowledge, skills and abilities (KSAs) of the government officials of Bangladesh.	Chi-Square Test	21.000	.000*	0.01	Significant
02	Long-term training is more likely to be effective to develop knowledge, skills and abilities (KSAs) of the government officials of Bangladesh.	The Mann-Whitney U Test	.000	.000* (1-tailed)	0.01	Significant
03	Effectiveness of the training to develop KSAs of the government officials varies significantly depending on the topics or subject matters of the training.	The Kruskal-Wallis Test	17.794	.013**	0.05	Significant
04	There is a significant association between type of training undertaken and enhancement of management & technical capacity of the government officials of Bangladesh.	Chi-Square Test	8.137	.043**	0.05	Significant
05	Long-term training is more likely to be effective to enhance management & technical capacity of the government officials of Bangladesh.	The Mann-Whitney U test	12.000	.004* (1-tailed)	0.01	Significant

06	Effectiveness of training to enhance management & technical capacity of the government officials varies significantly depending on the topics or subject-matters of training.	The Kruskal-Wallis Test	15.239	.033**	0.05	Significant
07	Long-term training is more likely to be effective to benefit (or contribute to) the government organizations of Bangladesh.	The Mann-Whitney U test	41.000	.395 (1-tailed)	0.05	Not Significant

* $P < 0.01$ (significant at 1% level of significance)

** $P < 0.05$ (significant at 5% level of significance)

Policy Recommendations

With regard to the effectiveness of technical cooperation (TC) in the form of overseas invitational training for the government officials of Bangladesh, the study suggests that TC works to facilitate capacity building at individual level. However, from institutional and societal point of view, invitational trainings have little or moderate contribution, in some cases no contribution to the recipients' organizations due to lack of alignment or matching between trainees' job responsibilities and topics of training, frequent transition of the government officials, and lack of scope to apply and so on. Therefore, TC to be effective from institutional and societal capacity building point of view, there should be a proper policy;

Supportive policy should also be undertaken so that concerned officials could apply their expertise in their respective organizations so as to support policy-making and implementation, deal with development projects and so on within organizational contexts that would maximize the effectiveness of trainings to contribute to institutional capacity building of the government organizations in the public sector of Bangladesh;

The empirical evidence of the study suggests that long-term training, that is, KOICA Master's Degree Program is more likely to be effective not only to develop knowledge and skills but also enhance the management & technical capacity of the government officials of Bangladesh and thus, the volume of long-term training offered to Bangladesh should be enhanced;

The Empirical evidence of the study suggests that effectiveness of KOICA's trainings not only varies significantly depending on the type of training but also across the topics or subject-matters of the training. The training courses focusing on public policy, international studies, environment and sustainable development, and institutional capacity building are more likely to be effective to facilitate capacity building not only at individual level but also in the context of institutional level. Therefore, training courses on such topics should be enhanced. Moreover, subject-matters or topics of the invitational trainings including courses of KOICA scholarship program should be diversified;

The study revealed that frequent transition or transfer of the government officials from one organization to another interrupts the process of institutional capacity building in the public sector of Bangladesh. Thus, it is highly recommended that the public officials holding overseas trainings should be allowed to serve for a certain period of time in such organizations where they could apply their acquired knowledge and expertise developed from overseas trainings. By doing so, overseas invitational training could support the institutional capacity building in the public sector of Bangladesh;

The study revealed that KOICA's short-term invitational trainings are not so study-based and not so comprehensive as well. Therefore, this is to recommend that KOICA should address this issue in order to make the short-term trainings more effective.

To maximize the effectiveness of training to facilitate capacity building, KOICA's all invitational trainings should be well-consistent or properly aligned with the needs of the trainees and recipient organization as well so that they could contribute to their respective organizations or the ministries of Bangladesh effectively. Hence, it is necessary to undertake proper policy to utilize TC in the form of training so that it could be effective not only to facilitate capacity building at individual level but also at organizational and institutional level in the public sector of Bangladesh.

Conclusion

In conclusion, it may be argued that Korea's technical cooperation in the form of trainings is effective to facilitate capacity building of the government officials of Bangladesh while attention should be paid on the effectiveness of TC to facilitate capacity building at organizational, institutional and societal levels which necessitate undertaking proper policy on the part of both Korea and Bangladesh. TC can be a powerful catalyst to facilitate human, institutional and societal capacity building in a least developed country like Bangladesh while its effectiveness mostly depends on prioritizing the needs of the developing country partner and actual beneficiaries or targeted groups, identifying recipient organizational needs, absorptive capacity of the recipient organization, and supportive government policy as well. Moreover, there should be proper alignment between TC in the form of training and the job responsibilities of the trainees (i.e. the govt. officials) so that they could contribute to their respective organizations including the ministries of Bangladesh especially in decision-making, policy-making and implementation as well as in policy analysis. As such, to maximize the effectiveness of TC, both the partner countries – developed and developing partners – should closely work together to identify and address such needs and priorities. TC is of critical importance for the LDCs so as to step up their sustainable economic growth and sound social development where development of human and institutional capacities of the LDCs should be a strong focus. However, to facilitate their human and institutional capacity building, much focus should be placed on education and training in technical cooperation efforts.

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CRIME AND VIOLENCE AGAINST FEMALE CHILD SEX WORKERS IN A BANGLADESHI BROTHEL

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Abstract: The article is an attempt to discuss the nature of immoral and unethical acts along with crime and violence against Female Child Sex Workers (FCSWs) in a Bangladeshi brothel. It particularly highlights some of the awkward events, activities and attitudes such as verbal abuse, extortion in payment, stealing money, forcible anal sex and gang rape and others of the customers towards FCSWs. The study is based on some selected case studies purposively selected, a few FGDs and KIIs from the study area. This exploratory work specifically reveals the cultural construction of FCSWs as a sub group considering them as a vulnerable population. Moreover, the article seeks to deal with various factors involved in this context, such as sexuality pattern, condom use culture, alcohol and various types of drug use culture, history of abuse in childhood, domination of power exercised by customers over FCSWs which often leads to sexual abuse, harassment, gang rape, crime and violence.

Introduction

There are many things happening inside a brothel while dealing with customers and other concerned people attached with female child sex workers. But in the present study, focus has been given on the nature of immoral and unethical acts along with crime and violence against Female Child Sex Workers (FCSWs) in a Bangladeshi brothel. The study also attempted to analyze the cultural construction of FCSWs as a sub group considering them as vulnerable population subjected to sexual abuse, harassment, gang rape, crime and violence.

The present study particularly highlights some of the awkward events, activities and attitudes (such as verbal abuse, extortion in payment, stealing money, forcible anal sex and gang rape) of the customers and others towards female child sex workers of the study location.

The behavior patterns, attitudes, beliefs and perceptions of female child sex workers are closely associated with their socio-economic as well as socio-demographic condition. It has been found that in most cases there have been previous experience of family alienation, bad experience of sexuality, poverty, etc., which turned them into this profession which means this socio-sexual culture is constructed through their biographical characteristics (Bajos et al., 1997; Wolffers and Beelen, 2003; Reynaga, 2008)

Female Child Sex Workers have some knowledge about human rights and laws. They are aware of it due to intervention and advocacy by many organizations, both government and non-government organizations. However, immoral activities are prevalent in brothel areas due to some cultural factors. Moreover, various factors involved in this context, such as

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sexuality pattern, condom use culture, alcohol and various types of drug use, history of sexual abuse in childhood, domination of power exercised by customers over them which leads to crime and violence have also been studied and reported in this paper.

Methodology

The study population is comprised of FCSWs at Daulatdia brothel. The study is exploratory in nature, based on primary and secondary data. It involves child sex workers as the main concern and their customers such as truck drivers, bus drivers, rickshaw pullers and other key informants as the sideline. Duration of the field work of the study was nearly 3 months (from early July to late September, 2009). During this period, the study area was visited twice for data collection.

For an intensive qualitative study of them, case studies have been conducted that provided primary data and respondents selected by using purposive sampling technique were interviewed. Primary data were collected by using qualitative methods, such as case studies on female child sex workers, Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) with different types of customers (e.g., truck drivers, rickshaw pullers, students, businesspersons, etc.) and observations were used for understanding the range of behaviors and issues that are relevant to crime and violence. Qualitative method has been used to obtain information from several related personnel, organizations and associations such as interviews with police, community police, brothel authority (such as house owners, *sardarnis*), observations were done and many NGOs and government offices dealing with crime and violence related issues were visited. Some in-depth interviews have been conducted with sexual partners of the target groups which supplement the main body of the findings of the present study. Throughout this study the qualitative data (cases) have been analyzed with some critical comparisons and discussions.

Dealing with Fixed Customers

Fixed customer culture is prevalent among the FCSWs in brothels. In a brothel area, among others truck drivers and bus drivers of Daulatdia *ghat* are also found as fixed customers. FCSWs can identify the customers by their dress and behavior, for example, they identify truck drivers by seeing them wear *lungi*, drink wine; when they talk they understand that they are truck drivers. *Mastans* of that area, leaders (*cadres*) and members of brothel community police are other big customers. Female child sex workers also find it difficult to negotiate safer sex with intimate partners and customers in the context of physical and sexual violence perpetrated by some of them. For example, in a survey conducted among Vietnamese sex workers in Cambodia, 30% of the sex workers reported that they had been sexually coerced by customers who were unwilling to put on a condom. (Schunter, 2001). It has been found that fixed customers and local *mastans* always try to have sex with them without any payment. FCSWs are often forced to sex including anal sex. If they try to refuse, they have to face violence like severe physical torture. The following story of a female child sex worker, Jhumka, explains such cases of physical assault.

Dealing with other customers

Truck drivers:

Some truck drivers visit exceptionally high commercial sex worker (CSW) patronage for extended periods away from home, high purchasing power, and extensive nationwide mobility. Sexual violence and the spread of HIV in Africa and Asia have been closely linked to truck driver mobility. The risky sexual behavior of these men and their constant movement all over Bangladesh can accelerate the rapid spread of HIV into urban as well as rural areas.

Jhumka is a girl of 13 years who works as a FCSW at Daulatdia brothel. At the age of twelve, she first joined this profession. She mentioned that the truck drivers of Daulatdia *ghat* and students from the adjacent areas visited her frequently. Most of the truck drivers drink alcohol. When they talk she understands that they are truck drivers. Her second highest number of customers is the students. Jhumka also reported that when she first started her work, that time, most of customers were truck drivers. But now their number is far less than before. Now the highest number of her customers is bus drivers. *Mastans* of the locality, leaders (cadres) and the brothel community police are also her customers. Jhumka has one fixed client. She has also one favorite person whom she considered as her lover. She thinks that he never had any sexual relation with other girls, but he sometimes assaulted her for various reasons. He also often borrowed money from her but never returned. She reported that she had been often beaten by her "*babu*" (fixed client/customer). She also reported that local *mastans* often forced her to have sex with them without any payment. Jhumka charges Tk. 50 to 60 as fees from general customers. Sometimes she took Tk.100 to 150 from some customers. Some customers give her "*bakshis*" Tk.20-30 up to Tk.50. The age of the customers ranges between 14 and 50 years.

Jhumka reported that many customers go there and stay there for 2-3 days and even a week. Some go in-group with 3-4 members and they stay there and drink alcohol and take "*ganja*" (marijuana). Most of the customers of Jhumka come from afternoon to 9-10 pm. She stated that regular and night time customers did more violent behavior with her than seasonal and day time customers.

In the study of this brothel area, truck drivers were the highest number of customers of FCSWs. The sexuality of FCSWs is very much influenced by their customers. The interactionist approach allows a better understanding of how risks of serious diseases are spreading through interaction between sexual partners (Lear, 1995)

From FGD findings, it was found that truck drivers engage in sex with multiple partners frequently. Long separation from their family and sleepless nights compel them to go to sex workers. They have strong aversion towards condom use, which hinders complete sexual pleasure. Most of the truck drivers take alcohol while having sex with FCSWs and engage in various types of violent behavior such as sexual torture with severe physical assaults, stealing money, forcing them to have anal sex on low payment and even without payment sometimes (Hossain, 2004; Hossain and Sumon, 2013). It may be mentioned that the truck and bus drivers in the study area were found to be less aware of the laws against criminal activities and human rights. However, they enjoyed strong support of the local level law enforcing agencies. (Wolffers and Beelen, 2003; Reynaga, 2008).

Rickshaw pullers:

Rickshaw pullers were also found to be a significant member of customers in the study area. The following were observed –

- Low level of awareness about laws against crime and human rights
- No fear of being punished by the law enforcing agencies
- They have also, like truck drivers, strong aversion towards condom use
- Most of them are involved in-drug business inside the brothel

- Most of them are engaged in liaising with FCSWs and new customers who are travelers. They often worked as "*dalals*" (pimps)

Businesspersons:

- The local small businesspersons are also engaged in sex in this brothel.
- Long separation from their families engages them in sex with multiple partners frequently.
- They engage in-group sex with commercial child sex workers.
- They are averse to use of condom for higher satisfaction during sexual intercourse with FCSWs.

Condom use

There is a close connection between condom use culture and violent behavior of the customers. Generally customers are less interested in using condom while having sex with FCSWs. But the sex workers try to compel customers in using condoms. Violence occurs when strong disagreement arises regarding the use of condom. On the other hand, it is important to note that the respondent FCSWs reported that condom use was a widely known concept to them. They are very much familiar with the use of condom, but they cannot compel customers to use condom for all the times due to various reasons, especially some cultural factors such as competing beliefs (Wolffers and Beelen, 2003; Fiona, 2004). In this respect, a few of the FCSWs perceives that there is a chance to face sexual violence with severe physical torture when they try to force customers to use condom. Another significant reason for not using condom by FCSWs is that they feel severe vaginal pain after entertaining six or seven customers with condom. Then they voluntarily reject the offer of using condom by customers even if they wish it.

Except vaginal sex, Jhorna (14) usually did not practice any other sex (specially anal or oral sex) with her customers. But sometimes under pressure she did oral sex with her favorite persons. However, she also said that she had done both oral and anal sex with customers who had paid her more money. She answered in the negative while she was asked whether she used condom or not during anal sex. I asked her further why she did not use it. She said that anal sex couldn't be done by using condom. Customers convinced her that anal sex was not possible with condom. Then she agreed to do anal sex with him. She reported that some customers tried to use condoms during anal sexual intercourse, but condom was torn. Some customers, especially the police and local *mastans* tried to bring diversity in using her body, but she refused them in doing this. Then she was sexually abused by them. Moreover, It is significant to note that community police inside the brothel often did sexual torture on her including physical assault while she tried to resist condom free sex.

Forms of sex practiced by FCSWs

Usually FCSWs practice vaginal sex with their customers. It was found that anal sex culture with their fixed and intimate customers and loving persons was also prevalent among them. Many of them think that it is not possible to practice anal sex with condoms. Again they also practice anal sex with those customers who pay higher charge. FCSWs reported that they are forced to have anal sex against their desire and they consider it as painful as rape. (Reynaga, 2008). Jhorna's story narrated below explains the situation:

Ability to pursue customers to use condoms

Though some FCSWs are able to pursue customers to use condoms, many of them cannot. The ability to pursue irregular customers to use condoms is higher than the regular and intimate customers. They are less interested to pursue their fixed customers and loving persons to use condoms. Eventually they sometimes have to experience unwanted pregnancy followed by abortion. Moreover, they are also vulnerable to sexually transmitted diseases (STDs) and HIV also.

There is another close connection between inability to pursue customers for using condom and violent behavior. In many cases, FCSWs are not able to pursue the police and *ansars* as customers; simultaneously they are harassed by them. In several settings police use anti-prostitution laws to harass, threaten, arrest, beat and sexually coerce sex workers. In Papua New Guinea, for example, sex workers participating in an HIV prevention intervention reported gang-rape and harassment by the police as a serious problem that impeded their ability to practice safer sex. (Jenkins, 2000; Reynaga, 2008; Wolfers and Beelen, 2003). In Kazakhstan, police routinely arrest and beat up sex workers and often force them to bribe arresting officers with money or sexual services.

Some special brothel culture which leads to immoral activities

There are some special cultures practiced by the FCSWs, which lead them not to use condoms during sexual act that turns into violence. It is also evident that within cultural groups, individual differences also exist (Ramirez, Suarez, de la Rosa, Castro, and Zimmerman, 1994).

Jhorna (14), mentioned earlier, was a garment worker before she came here. She was often sexually abused by her supervisor. She was once trapped by one of her senior garment's colleagues and that colleague put her into this brothel as she reported. She has a fixed client and loving person also. She believes that AIDS does not affect if she has sex with fixed customers and favorite persons, she does not ask for the use of condoms during intercourse with them. Jhorna told that she has some favorite persons and fixed customers who never do sexual intercourse with anybody else except her. For this reason, with those selected customers, most of the time she does not ask for the use of condoms. She had experienced sexual intercourse with them for several times without condoms. She reported that she had not felt yet any complexity for that. She also experienced unwanted pregnancy followed by abortion several times.

In the present study, it was found that FCSWs think that their "*babus*" (fixed customers) are never ever affected by HIV/AIDS. They also think that their fixed customers do not practice sexual intercourse with anybody else except them and they generally do not do sexual torture on them. For this reason, they do not try fixed customers to use condoms during sexual intercourse. It is their belief system, values or ideology (Giddens, 2001; Wolfers and Beelen, 2003).

Differences in condom use depending on the partners (principal or non-regular) are found in most cases on sexual behavior (Khan and Arefeen, 1995:92).

Depending on the customers' evaluation of sex, inconsistent condom use was found frequent. In this respect, FCSWs practice the culture that if customers see them (FCSWs) as young, pretty and clean, they feel condom use is not necessary and FCSWs also support them (Habib, Amanullah and Hasan, 2000). This finding is also supported by some studies in the South Asian Region (Fajans et al., 1995; Wolfers and Beelen, 2003).

FCSWs are also become involved in love, romance and matters of emotional feelings. They believe that sexual intercourse with their lovers is HIV/AIDS risk free. For this, they do not insist them to use condoms (Bajos, 1997). At the same time, they also think that condom use with regular partners or intimate customers is not necessary due to their perception of minimal risk for HIV or STD transmission (Fajans et al., 1995).

Many of the FCSWs do not want the use of condoms frequently and consequently they face immoral acts, risky behaviors as well. It means that the larger the number of customers, the lesser the use of condoms. In this respect, they interpreted this culture in the way that when they did continuous sexual intercourse with their customers, they felt pain in their vagina and did not want the use of condoms (Wolffers and Beelen, 2003). Jhumur's story below explains it:

Jhumur is a 15-year old girl. She looks quite beautiful. She claims that she is a deprived girl. As her parents expired early, her elder brother stays abroad, she always felt upset. At that moment, she claimed, her only sister-in-law also did not support her emotionally and even logistically. Gradually she became alienated from family bondage and felt very lonely. One day, she stepped out of their house with the help of her senior friend to get a job in a company. But she experienced gang rape by those people who were known to her as senior friend. After that she came into this profession. She deals with more customers per day. During the last intercourse, she did sex with a client without condom as she reported. Sometimes she does not want her customers to use condom due to her physical problem. With continuous use of condoms, she feels pain in her vagina and at that time if any customers want to do sexual intercourse with condom she feels scared and feels much pain in her vagina. For this, she does not want the customers to use condoms and she persuades her customers not to use condoms. She reported that she often experienced brutal sexual torture including anal sex while negotiating sex without condom use. Sometimes she was physically assaulted by her crazy customers.

Their culture is very much affected by the media which often leads to crime and violence. They often follow the satellite culture where porno culture is available. They are familiar with current vulgar film and porno culture, which encourages risky sexual behavior with violence.

FCSWs are influenced by their community culture, such as norms and values or set of principles, especially in the brothel-based sex work. Their community culture reflects that they serve their bodies and they should sell their sex according to their customers' will and depending on their economic needs (Douglas, 1994; Kelly, 1992). They think it appropriate to meet their economic needs through getting money from their customers by satisfying them. Their main purpose is to satisfy them; protection of human rights and awkward acts are less important in their brothel culture. (Munro, 2008).

They are also affected by drug culture. They think that drug encourages condom free sex. The drug users do not use condoms and involve in different types of violent behavior while taking drug. It will be discussed in another section later.

Lower self-identity of FCSWs leads to unprotected sex and eventually they face violent behavior, especially extortion of money, gang rape etc., by their customers. They think that their status is low in society and they should not force the customers to do what they do not want and also should not or cannot discourage them to commit any kind of unethical activities. FCSWs perceive that they should satisfy their customers at any cost, even by experiencing violence (Wright, 2004).

They are powerless over the demands of customers and they also believe that they cannot protest against their customers' will. Improper course of conduct (hostility) against their customers is ominous to their business, as they perceived.

Alcohol and Drug

Selling sex along with drug use is an indicator of very high risk sexual behavior and violence. In relation to crime, such risky behaviors include engaging in sexual activity in exchange for money, having sex while using alcohol and/or drugs (*ganja*, phensedyl, sedative tablets) (Loxley, 1995; Raj et al., 2006).

Drug culture is prevalent among the FCSWs. They perceive it as their traditional culture. Their group norms and values about drug use are inconsistent with AIDS preventive behavior (Gabe, 1995). The availability of media culture including porno culture encourages the higher frequency of drug use (Habib, Uddin and Sumon, 2009). They believe that alcohol and drug use or substance helps to achieve larger acceptance of customers. Condom use was low and experiencing violence was high among those customers who took drug frequently (Inciardi, 1995). Some gatekeepers may exert control through subtle means such as holding a debt, emotional manipulation or through overt means such as threat of and actual sexual and physical violence, physical isolation, threat of handing them over to legal authorities and forced drug and alcohol use. (Alexander, 2001; Wright, 2004). Alcohol use was very common among them while or before having sex, but they had less interest to buy alcohol, it was generally provided by their customers. "*Ganja*" (local type of marihuana) was very much prevalent among FCSWs. It was observed that "*Bangla mod*" (a local variety of alcohol) was the dominant type of alcohol they drink. Here is a story from Jhalok:

They had no experience about needle sharing or taking drug through syringe; but they could not state their customers' needle sharing or using syringe.

Jhalok is a 13-year old girl. She is illiterate and unmarried. During her early childhood she was raped by one of her uncles and consequently she felt that she was a mentally handicapped girl. Before coming here, she worked as a floating sex worker. She often had to face sexual exploitation including violent behavior by policemen, security guard assigned to park while selling sex as a floating sex worker. Sometimes she had to entertain more than one client under contract in day time. She takes "*Ganja*" (marijuana), sedative tablets and phensedyl frequently. She reported that she took it for the first time in response to her sex worker colleagues' persuasion, but now she is addicted to it. She often takes it in a group with her sex worker friends. She also reported that she experienced violent behavior such as physical torture, low payment or no payment by her customers during selling sex while taking drug. It is significant to note that she experienced gang rape by her customers when she became drunkard. Jhalok said she was sometimes cheated in the form of extortion of money and forcible sex by members of community police (as *dalals*/pimps) while taking drug with customers.

From Dhaka many customers go there and stay there for 1-2 days. Some customers go in-group of 3 or 4 who stay there and drink wine and take "*Ganja*" (marijuana). It was observed that the number of customers is higher during winter and lower in the rainy season in brothel. It was also observed that the number of daytime customers is higher than the night time customers (Saunders, 2005; Raj et al., 2006; Munro, 2008).

Domination of power: Sexual and other violence

Passivity and a limited sense of power may also be factors, which compel the FCSWs into risky behavior. Sexual and other violence are prevalent among child sex workers in almost all the areas. They often encounter different types of violence by customers, gangs, *mastans*, police, transport leaders and their pimps. Society's attitudes and views are generally negative towards their rights and expectations. Though violence against women

is very often focused on adult female sex workers, it should be more focused on male and transgender sex workers as well as children who are forced into prostitution as sex slaves. Research from Bangladesh, Namibia, India and elsewhere shows that many sex workers, particularly those who work on the streets, one reportedly being beaten, threatened with weapon, slashed, choked, raped and coerced into sex. (Hubbard and Zimba, 2003; Wright, 2004; Saunders, 2005)

They have to provide free sex to "*mastans*," (goons) and "*Ansars*" deployed at brothel areas and their brokers. A few of them reported being raped by men in uniform in the previous months and a significant number of FCSWs reported being raped by local criminals. Sometimes they have to pay money called "*Chanda*" to the police and local leaders and *mastans*. They are often cheated by their customers. They often face some harassment as well (Khan and Arefin, 1989; Islam et al., 2003). Jhumur's words explain the matter:

It is important to note that in several countries, certain activities such as rescue raids of sex establishments have exacerbated violence against sex workers and compromised their

Jhumur (15), mentioned once earlier, is a sex worker in the Daulatdia brothel, says that sometimes her customers cheated her. One of her clients hired her into the house for himself but several people had sex with her by violating the contract. Sometimes some customers do not pay her according to contract, but used her. Some drunkard customers tortured her. Some rickshaw pullers wanted to have sex with her abnormally, which seems to her as a sexual torture. Jhumur is compelled to have free sex with local *mastans*, brokers, police and also some office staff of different NGOs. The members of Police, Community police and brokers usually take money from her. She was often offered to entertain group sex by local *mastans* and she could not resist them. She often faces sexual harassment and even was molested by them. She had also experience of rape. She experienced a gang rape by her customers as she reported.

safety. For example, research from Indonesia and India has indicated that sex workers who are rounded up during police raids are beaten, coerced into having sex by corrupt police officials in exchange for their release or placed in institutions where they are sexually exploited or physically abused. (Wright, 2004; Surtees, 2003; Reynaga, 2008).

Many research findings show that violence is a manifestation of the stigma and discrimination experienced by female child sex workers. In all societies, sex work is highly stigmatized and sex workers are often subjected to blame, labelling, disapproval and discriminatory treatment. Laws governing prostitution and law enforcement authorities play a key role in the violence experienced by sex workers.

In most countries, sex work is either illegal or has an ambiguous legal status (e.g. prostitution is not illegal, but procurement of sex workers and soliciting in public is illegal). Sex workers are, therefore, frequently regarded as easy targets for harassment and violence for several reasons. They are considered immoral and their works deserve punishment. Criminalization of sex work contributes to an environment in which violence against sex workers is tolerated leaving them less likely to be protected from it. (Wright, 2004; Rekart, 2005; Saunders, 2005)

Criminalization and stigmatization of both sex workers and their customers allow rampant violence against sex workers to continue. Regarding human rights issue, governments must decriminalize sex work and institutionalize crime prevention measures to protect sex workers while they work. However, it is found that no policy measures will be fully effective until cultural attitudes shift from viewing sex workers as disposable non-citizens to full citizens whose human and labor rights need to be respected (Sanders, Teela and Campbell, 2007).

At the policy level, violence reduction and prevention efforts have focused on advocacy. This includes liaising with rights groups; forming international and national networks of sex workers who speak out about their situation in various forums; dialoguing with policy-makers to change repressive laws and policies; and working with media to change perceptions of sex work. (Red and Saul, 2003). In Argentina, for example, sex workers have formed their own unions and joined with existing labor unions to demand better working conditions including health, safety, contractual rights and decriminalization of sex work. These unions have lobbied for sex work to be recognized as valid paid work and to be included in larger labor struggles. (Irrazabal, 2004).

Conclusion

The study presents high incidence of violent behavior which leads to crime as well as immoral or unethical activities among the female child sex workers due to sub-culture of their community, which indicates higher level of violence in our society. The study also tried to explore how the perceptions, belief system, attitudes and practice among the commercial child sex workers leads to violence.

Throughout this paper, it has been revealed that external knowledge or awareness is ineffective because it has failed to take FCSWs' levels of cognitive development into account. Due to cultural barriers, FCSWs often fail to grasp the application of awareness or education for their own lives.

Drug or substances use is also prevalent among them. They perceive it as their traditional culture. Higher frequency of alcohol and drug use is closely associated with the increased risky sexual activity. Selling sex along with alcohol and drug use is an indicator of very highly risky sexual behavior. In relation to violence, such risky behaviors include engaging in sexual activity in exchange for money, having sex while using alcohol or other drugs.

Condom use is low, and immoral or awkward activities are high among those child sex workers who take alcohol or drug frequently. The availability of media including porno culture encourages the higher frequency of alcohol and drug use. Alcohol and drug use encourages larger acceptance of customers by them. Almost all the FCSWs reported that they did not use condom during sexual intercourse with the customers while taking alcohol or drug and eventually they face violent behavior by their customers.

Sexual and other violence are prevalent among child sex workers in almost all the areas. They often encounter different types of violence by the customers, gangs, *mastans* and members of police among others. When female child sex workers are intimidated, coerced, or forced into sexual activity, they are unlikely to be able to adopt protective measures such as use of condom against diseases or unwanted pregnancy. Society's attitudes and views are generally negative towards their rights and expectations.

Sexual violence in association with alcohol and drug use leads them to unprotected sex. They are powerless over the demands of the customers and they also believe that they cannot protest against their customers' will. Improper course of conduct and hostility against their customers is ominous to their business, as they perceived.

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THE EFFECT OF EDUCATION ON WOMEN'S FERTILITY IN BANGLADESH

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Abstract: In this study we examined the effect of education on fertility among women in Bangladesh using the nationally representative 2007 Bangladesh Demographic and Health Survey data. Both bivariate and multivariate statistical analyses were employed in the study. The mean number of children ever born to per ever married woman was found to be 2.8. Findings reveal that educational attainment among women has increased substantially over the past decades. The multivariate Poisson regression analysis yielded quantitatively important and reliable estimates of the effect of women's education on cumulative fertility. The findings show strongly significant ($p < 0.001$) negative association between women's education and cumulative fertility for both the young and elder women and as a whole. More investment in females' education may foster economic growth, help keep smaller family size as well as contribute to fertility reduction that need to be reached at replacement level of fertility in Bangladesh.

Key words: Contraception, Education, Fertility, Poisson regression.

Introduction

In recent decades fertility has declined at a rapid pace in a majority of developing countries (Bongaarts, 2008). Bangladesh has undergone a dramatic decline in fertility over the last three decades. The total fertility rate has declined from a high level of 6.3 live births per woman in the mid-1970s to 2.3 live births per woman in 2011. Such a credible decline in fertility is mainly attributed to the successful family planning program of the country (Caldwell et al., 1994; Kabir and Uddin, 1987), increase in the contraceptive prevalence rate and a decline in the proportion of married in the younger age groups (Kabir and Uddin, 1987). With the demographic transition theory thought to be intact in explaining fertility transition in any society, rapid pace of fertility decline is expected only with a significant economic and social change.

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Education has long been recognized as a crucial factor affecting women's reproductive behavior including fertility. Researchers no longer regarded the impact of education on fertility as automatic but as conditioned by the level of development, social organization, gender stratification and cultural milieu of the surrounding society (Martin and Juarez, 1996). Women's education occupies a unique place in demographic discourse and policy, because a large amount of empirical research has revealed that educated women delay marriage, use contraceptives and produce many other beneficial reproductive and child health outcomes. In recent years, new research showing that a woman's schooling affects the reproductive and health behaviors of other women has raised the possibility that female education has greater capacity to transform the demographic landscape of a society than is currently believed (Kravdal, 2002).

Education is a source of knowledge transmission, vehicle of socioeconomic advancement, and a transformer of attitudes. In the contemporary world, any development depends on the effective transmission of new information. Schooling imparts literacy skills, which enable people to process a wide range of information and stimulate cognitive change that shape individuals' interaction with their surrounding environment (Martin and Juarez, 1996). As a vehicle of socioeconomic development, education not only enhances cognitive abilities, it also opens up economic opportunities and social mobility. In the contemporary world, education credentials open the door for formal employment and for sorting individuals into the hierarchy of occupations (Ayoub, 2004). Education transforms individual attitudes and values from traditional toward modern and thereby enhance modernization, which is essential and reliable to regulate fertility.

From a theoretical point of view, education has a negative effect on the propensity to have children. A core explanation for this comes from economic theory: a higher income may well increase the demand for children but the higher opportunity cost of having another child is assumed to outperform this income effect. It is also assumed that higher educated women are more likely to postpone timing of marriage. They are more informed of effective contraceptive method and have a more efficient use of contraception. Education is more likely to impart in women the 'quality-quantity trade-off' of their children. Most of these women are likely to see the benefit of their schooling; they may develop higher aspirations for their own children's schooling. It is obvious that as the number of children increases, family resources available to an individual child decrease eventually. Restricting the number of children is the best solution in order to have better-educated children and more family resources per child. It would be advantageous for a woman to have fewer children as she can afford to pay for the tuition and other related fees associated with schooling, hence the trade-off between quality and quantity of children (Ayoub, 2004).

Bangladesh has achieved remarkable progress in education since its independence in 1971. Understanding that education is a key weapon for human development, the government of Bangladesh launched free schooling and stipend program for financially disadvantaged girls up to secondary level of education in the beginning of 1990s. An estimate shows that the net enrolment rate of children aged 6-10 years in any class was 86.4% in 2008 along with girls 87.1% and boys 85.6% (Nath and Chowdhury, 2009). In 1974, the adult literacy rate among male and female was only 37.2% and 13.3% respectively, which rose to 38.0% and 53.5% in 2000 (Asian Development Bank, 2004). The 2007 Bangladesh Demographic and Health Survey suggests that, irrespective of marriage, 54.5% of the women aged 15-49 were literate, while the corresponding figure for men aged 15-54 was 56.4% (NIPORT et al., 2009).

Among the many factors that remain significant, women's access to formal education can improve their labor market bargaining power, while potentially facilitating their participation in national health programs designed to depress fertility (Oakley and Rodriguez, 2005). For this reason, health policy-makers remain interested in knowing whether investments in formal education reduce fertility (Tuman et al., 2007), and if so,

what the mechanisms are for this relationship. Studies conducted so far on fertility transition in Bangladesh mainly focused on understanding the contribution of the proximate determinants (Kabir et al., 2006; Kamal and Islam, 2006). A little is known on the effect of education on fertility in Bangladesh. In this paper, an attempt has been made to examine the effect of education on cumulative fertility controlling for other important covariates among ever married women of Bangladesh.

Data and methods

Data

In this study data from the Bangladesh Demographic and Health Survey (BDHS) 2007 (NIPORT et al., 2009) has been used. The BDHS is a nationally representative survey of 10,996 ever married women aged 15-49 years from 10,400 households. The survey obtained detailed information on socio-demographic variables such as education, fertility, marriage, fertility preferences, knowledge, awareness and use of family planning methods, breastfeeding practices, nutritional status of women and young children, childhood mortality, maternal and child health, knowledge and attitudes regarding HIV/AIDS and other sexually transmitted infections (STIs) etc.

Dependent variable

The dependent variable of this study is 'fertility' –measured by the total number of live births given by a woman in her reproductive life. It is also referred to as cumulative fertility.

Independent variables

The main focus of the study is on the assessment of the effect of women's schooling on fertility. To assess the effects of exposure to formal education on fertility, women's schooling was categorized as non-formal education, primary, secondary and higher education. The women were grouped into below 25 and 25 or above years of age. This was done to examine to what extent women's education influence the fertility among the young group who are the beneficiaries of female stipend program of Bangladesh and the older group who are assumed to be lagging behind in terms of education than the young women. The other demographic and socioeconomic factors included for analysis are: age at first marriage (<18, 18+ years), number of children died (none, at least one), use of any contraceptive method (never used, ever used), working status (not working, working), place of residence (urban, rural), administrative regions (Barisal, Chittagong, Dhaka, Khulna, Rajshahi, Sylhet), religion (Islam, others) and wealth index (very poor, poor, average, rich, very rich).

Statistical techniques

The fertility measured by the total number of children that a woman gave birth in her reproductive period is a type of count data. Given the count nature of the outcome variable, a generalized linear model (GLM) with a natural logarithmic link function like Poisson regression was adopted to assess how the predictor variables influence the level of fertility.

Let Y_i denotes the number of children ever born to i th woman of reproductive period and t_i denotes the observation time for the i th woman. Let λ_i denotes the mean rate of children per unit time so that the mean number of children for the i th woman is given

by $\lambda_i t_i$. We assumed that Y_i has a Poisson distribution with log of the mean. The probability function of Y_i is given by:

$$f_i(y_i; \lambda_i) = \frac{e^{-\lambda_i} (\lambda_i)^{y_i}}{y_i!}; \text{ where, } y_i = 0, 1, 2, \dots, 14; \text{ and}$$

$$\lambda_i = t_i \lambda_i(x_i) = e^{\ln(t_i) + \beta_0 + \beta_1 x_{1,i} + \dots + \beta_k x_{k,i}} = e^{\ln(t_i) + \sum_{j=1}^p \beta_j x_{j,i}}$$

$$\text{or, simply, } \lambda_i = \exp \left[\ln(t_i) + \sum_{j=1}^p \beta_j x_{j,i} \right];$$

where, x_i is a $(K-1)$ dimensional vector of explanatory variables including socioeconomic, demographic and other personal characteristics of the respondent, and β is a K dimensional vector of regression parameters and $\ln(t_i)$ is an offset variable. In this study, current age of women is the time at which observation for the number of children ever born was made on the i th woman. The mean and variance of y_i is given by:

$$E[Y_i | x_i] = V[Y_i | x_i] = \lambda_i.$$

The likelihood function of the Poisson regression model is:

$$L(\beta | y, X) = \prod_{i=1}^N f_i(y_i; \lambda_i) = \prod_{i=1}^N \frac{e^{-\lambda_i} (\lambda_i)^{y_i}}{y_i!}.$$

After taking the natural log, numerical maximization can be used to find a maximum and estimate the coefficients. Since the likelihood function is globally concave, if a maximum is found, it will be unique.

We conducted Poisson regression analyses separately for young, elder and for all women combining the young and elder women. The model-fitting process involved two stages of estimation. In the first model 'women's education' was the only independent variable. This was followed by multivariate analysis that comprises all independent variables considered for analysis including women's education. The results of the Poisson regression analyses have been presented by Incidence Rate Ratio (IRR) with 95% Wald Confidence Interval (WCI) and Standard Error (S.E.). In addition, to assess the association between fertility and various socio-demographic variables including women's education, Analysis of Covariance (ANCOVA) was applied prior to conducting the Poisson regression to examine the homogeneity of the adjusted mean number of children ever born (MNCEB) to per ever married woman within each of the categories of the independent variables. The MNCEB to per ever married women for all independent variables was adjusted by the duration of marriage except for age at first marriage. For age at first marriage, the MNCEB was adjusted by women's level of education. All of the statistical analyses in this study were done by SPSS v17 (SPSS Inc, Chicago, IL).

Results

Respondent's characteristics and mean cumulative fertility

Table 1 shows the mean and frequency distribution of ever married women by their background characteristics. Overall, the mean age of the women was 30.4±9.3 years. The mean age of the younger cohort was 20.2±2.6 and that of the age group 25-49 was 35.4±7.1 years. The mean age at first marriage of all women was 15.2±2.7 years and that

of the young and older women were 15.3 ± 2.2 and 15.1 ± 2.9 years respectively. The younger women were advantaged in terms of education. For instance, only 13.2% of the young women had no formal education, whereas it was 44.2% among those aged 25 or above (Figure 1). Of the young women, 83.4% were married-off before age 18; although a substantial proportion of the adolescents remained unmarried at the time of survey. Almost one-third of the older women had experienced child loss. This proportion was only 7.2% in the young women. Of the young women, three-fourths had ever used any contraceptive method and the reported use rate of any contraceptive method was almost 83.0%. Among the young women, almost one-fourth were working. Approximately, three-fourths of the young and older women were rural residents and the vast majority was Muslims by religion. The large proportion of women was from Dhaka region, followed by Rajshahi, Chittagong, Khulna, Sylhet and Barisal regions respectively. With regards to wealth index approximately 20.0% were from each of the five wealth quintiles.

Differentials of cumulative fertility by background characteristics of women

Table 2 shows the adjusted MNCEB to ever married women by their background characteristics. Overall, the MNCEB to per ever married woman was 2.80. The adjusted MNCEB to the young and the elder was 1.17 and 3.57 respectively. The MNCEB to women differed significantly by 0.57 between the women who had no formal education and those who had at least secondary level of education. The age cohort of women showed significant difference of cumulative fertility by women's education, the cumulative fertility was lower among the women who had secondary and higher education; and higher among those who had no formal schooling. Further, the table shows significant difference of MNCEB to the women by age at first marriage, child loss, ever use of any family planning (FP) method, working status, region, religion and wealth index. Although place of residence did not show significant difference in MNCEB among the young, it was significantly associated with the elder women. Overall, rural women as compared to their urban counterparts had higher MNCEB.

Effect of women's education on fertility

Table 3 demonstrates the gross effect of women's education on MNCEB to per currently married woman obtained by Poisson regression analysis. As can be seen from the table, the effect of education on fertility is apparently consistent. The higher was the level of education the lower was the cumulative fertility. The exponentiated effect parameters suggest that among the young women who had no formal education and those who had primary education had cumulative fertility higher by 69.0% (IRR=1.69, WCI=1.56-1.83) and 41.0% (IRR=1.41, WCI=1.32-1.50) as compared to those who had at least secondary level of education. Among the elder group aged 25-49, who had no education and who had primary education had MNCEB higher by the factors 1.55 and 1.40 as compared to those who had secondary or higher education. Overall, when all women were considered altogether, the direction of having cumulative fertility by women's educational attainment was similar to those of young and elder.

Table 4 shows the effect of women's education on fertility, when other socioeconomic, demographic and cultural factors were controlled. Although the inclusion of the factors substantially attenuated the effect of women's education on fertility, the effect remained robust and appeared in expected pattern. For instance, when other factors were controlled, the young women with no formal education and those who had primary education had cumulative fertility higher by 23.0% and 16.0% respectively than those who had secondary or higher education. Likewise, among women aged 20-49, cumulative fertility was higher by 14.0% and 11.0% respectively among those who had no formal education and who had primary education than those who had secondary or higher education.

Effect of other socioeconomic factors on fertility

Table 5 shows that age and age squared showed significantly positive relationship with fertility. Cumulative fertility was higher by a factor 2.01 among the young women who got married before age 18 than those who were married-off at age 18 or above. The MNCEB in ever married young women was lower by 44.0% who had never experienced child loss than those who had this experience. Of the young women, those who had ever used any FP method had higher cumulative fertility than those who had never used any FP method. Women's working status and place of residence showed no effect on cumulative fertility among the young women; whereas these variables appeared to have significant effect on cumulative fertility in elder women, when all women were considered together. The fertility was higher among rural residents and non-working women. When women were classified into young and elder group and when they were combined, region, religion and wealth index showed significant effect on cumulative fertility. The women from other regions as compared to those of Sylhet region, the Muslim as compared to the non-Muslims and the poor as compared to the rich had higher MNCEB.

Discussion and conclusion

This paper examined the effect of women's education on fertility among Bangladeshi women based on the nationally representative 2007 BDHS data. The mean cumulative fertility among ever married women was 2.8 children. When the women were grouped into young and elder, it is apparent that female education has increased over time. For instance, among the young women aged 15-24, only 13% had no formal education. The corresponding figure for the women aged 25-49 was 44%. Moreover, of the young women, 56% had at least secondary level of education; while this proportion was 27% among the elder women. The application of statistical techniques revealed that education and fertility is inversely related, a finding that is consistent with numerous studies (Adhikari, 2010; Tuman et al., 2007).

Many observations can be derived from this attempt to analyze the determinants and the homogeneity in the fertility levels in Bangladesh, where fertility transition has reached its ultimate stage. First, as compared to the variables indicating socioeconomic status like wealth index, demographic factors like age, child mortality and females' age at first marriage, behavioral factors like contraceptive use and cultural factors like religion affect cumulative fertility significantly. Other factors that have been identified to have significant effect on fertility are region, current place of residence and working status of women. However, most of the findings of this study are consistent with studies conducted elsewhere (e.g. Adhikari, 2010).

The study deserves some discussion on its limitations. First, it used a cross sectional and retrospective survey data that might have underreporting error such as reporting in current age, age at first marriage etc. In countries where vital registration system is not properly followed, there might have such recalling error that may produce bias findings. Second, due to the cross sectional design of the study and the variables analyzed in the

regression model, it can only provide evidence of a statistical association between those variables and children ever born and cannot show a cause-effect relationship. Errors could also exist in the collection of information regarding the number of children ever born. Women tend to omit some of the children they have given birth to, particularly those living in other households and those who have died. Another error in the reported number of children ever born may arise from the inclusion of stillbirths or late fetal deaths among live born children. However, there may in fact be few errors in this regard as it is believed that the BDHS data are good enough to estimate fertility directly and are used nationally and internationally in demographic research and public health issues.

However, this study suggests that investment in women's education should be a practical priority. For instance, higher level of education is important for girls to remain single for a longer period which helps in reducing fertility through substantial postponement of timing of marriage. It is also evident that the higher the level of education the lower the risk of child mortality. Program should be undertaken to educate males and females uniformly across the country. Thus, more investment in education is necessary as it increases knowledge and cognitive skills to use effective modern methods in fertility regulation. Investment in female education will foster economic growth, help maintain smaller family size as well as contribute to fertility reduction that need to be reached at replacement level of fertility in Bangladesh.

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Appendix

Table 1: Mean and Frequency distribution of the ever married women by current age and other background characteristics

Characteristics	Current age (in years)		All women N(10,996)
	<25 (N=3,599)	25+ (N=7,397)	
Mean current age	20.2±2.6	35.4±7.1	30.4±9.3
Mean age at first marriage	15.3±2.2	15.1±2.9	15.2±2.7
Women's education			
No education	13.2	44.2	34.1
Primary	30.4	29.3	29.7
Secondary+	56.4	26.5	36.3
Age at first marriage			
<18	83.4	83.2	83.3
18+	16.6	16.8	16.7
Child mortality			
No	92.8	67.8	76.0
Yes	7.2	32.2	24.0
Ever used any FP method			
No	24.5	17.2	19.6
Yes	75.5	82.8	80.4
Working status			
Not working	76.9	63.5	67.9
Working	23.1	36.5	32.1
Residence			
Urban	20.8	23.5	22.6
Rural	79.2	76.5	77.4
Region			
Barisal	5.9	6.1	6.0
Chittagong	19.3	18.0	18.4
Dhaka	30.9	31.3	31.2
Khulna	12.6	12.8	12.7
Rajshahi	25.4	25.2	25.2
Sylhet	5.9	6.7	6.4
Religion			
Islam	91.8	90.6	91.0
Other	8.2	9.4	9.0
Wealth index			
Poorest	17.3	20.2	19.2
Poorer	20.5	19.2	19.6
Middle	21.7	19.0	19.9
Richer	22.0	19.8	20.5
Richest	18.5	21.8	20.7
Total	100.0	100.0	100.0

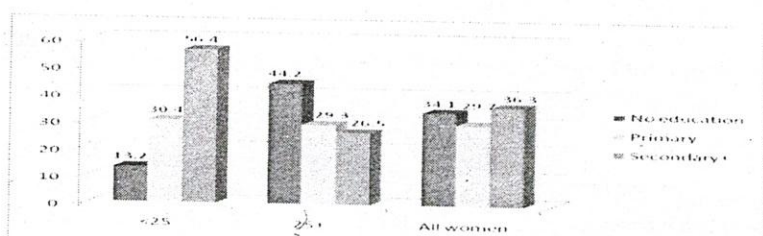


Figure I: Educational attainment of women by current age.

Table 2: Adjusted mean number of children ever born to per ever married woman by current age and other background characteristics

Characteristics	Age group						All women		P value
	<25			25+			Mean	S.E.	
Women's education			<0.001			<0.001			<0.001
No education	1.35	0.031		3.80	0.029		3.05	0.024	
Primary	1.20	0.020		3.66	0.035		2.87	0.024	
Secondary +	1.12	0.015		3.09	0.039		2.48	0.024	
Age at first marriage			<0.001			<0.001			<0.001
<18	1.26	0.016		3.73	0.023		2.89	0.19	
18+	0.74	0.037		2.80	0.053		2.30	0.43	
Child mortality			<0.001			<0.001			<0.001
No	1.10	0.011		3.05	0.022		2.43	0.015	
Yes	2.11	0.040		4.67	0.032		3.95	0.027	
Ever used FP method			<0.001			<0.001			<0.001
No	1.00	0.023		3.11	0.046		2.37	0.030	
Yes	1.23	0.103		3.68	0.021		2.90	0.015	
Working status			<0.001			<0.001			<0.001
Not working	1.20	0.013		3.69	0.024		2.86	0.017	
Working	1.10	0.024		3.38	0.032		2.65	0.024	
Residence			<0.984			<0.001			<0.001
Urban	1.17	0.026		3.26	0.042		2.59	0.031	
Rural	1.17	0.012		3.66	0.021		2.85	0.015	
Region			<0.001			<0.001			<0.001
Barisal	1.17	0.041		3.85	0.068		2.98	0.049	
Chittagong	1.31	0.026		4.06	0.045		3.15	0.032	
Dhaka	1.16	0.020		3.59	0.033		2.80	0.024	
Khulna	1.00	0.034		2.96	0.057		2.32	0.041	
Rajshahi	1.10	0.022		3.14	0.036		2.48	0.026	
Sylhet	1.42	0.041		4.49	0.065		3.50	0.047	
Religion			<0.01			<0.001			<0.001
Islam	1.18	0.012		3.61	0.20		2.82	0.014	
Other	1.08	0.039		3.25	0.62		2.55	0.045	
Wealth index			<0.001			<0.001			<0.001
Poorest	1.22	0.027		3.95	0.041		3.10	0.030	
Poorer	1.29	0.024		3.75	0.042		2.94	0.030	
Middle	1.13	0.024		3.72	0.043		2.85	0.030	
Richer	1.14	0.024		3.38	0.043		2.63	0.030	
Richest	1.09	0.028		3.07	0.043		2.43	0.031	
Total	1.17	0.011		3.57	0.019		2.80	0.013	

Table 3: Poisson regression showing the gross Incidence Rate Ratio (IRR) with 95% Wald Confidence Interval (WCI) and Standard Error (S.E.) of mean number of children ever born to ever married women of Bangladesh

Characteristics	Age group				All women	
	<25		25+		IRR(WCI)	S.E.
	IRR(WCI)	S.E.	IRR(WCI)	S.E.		
Women's education						
No education	1.69(1.56-1.83) ^a	0.041	1.55(1.50-1.60) ^a	0.016	2.11(2.06-2.18) ^a	0.014
Primary	1.41(1.32-1.50) ^a	0.034	1.40(1.35-1.44) ^a	0.018	1.63(1.58-1.68) ^a	0.016
Secondary+	Ref.	---	Ref.	---	Ref.	---

Note: level of significance ^a $p < 0.001$.

IRR = Incidence Rate Ratio; and WCI = Wald Confidence Interval.

Table 4: Poisson regression showing the Incidence Rate Ratio (IRR) with 95% Wald Confidence Interval (WCI) and Standard Error (S.E.) of mean number of children ever born to ever married women of Bangladesh

Characteristics	Age group				All women	
	<25		25+		IRR(WCI)	S.E.
	IRR(WCI)	S.E.	IRR(WCI)	S.E.		
Current age	2.14(1.72-2.66) ^a	0.112	1.09(1.07-1.11) ^a	0.010	1.20(1.19-1.21) ^a	0.005
Age squared	0.99(0.98-0.99) ^a	0.003	1.00(1.00-1.00) ^a	0.001	1.00(1.00-1.00) ^a	0.001
Women's education						
No education	1.23(1.12-1.35) ^a	0.046	1.14(1.09-1.18) ^a	0.019	1.15(1.11-1.19) ^a	0.018
Primary	1.16(1.08-1.25) ^a	0.036	1.11(1.07-1.15) ^a	0.019	1.13(1.09-1.17) ^a	0.017
Secondary+	Ref.	---	Ref.	---	Ref.	---
Age at first marriage						
<18	2.01(1.81-2.23) ^a	0.054	1.29(1.24-1.34) ^a	0.020	1.36(1.31-1.41) ^a	0.019
18+	Ref.	---	Ref.	---	Ref.	---
Child mortality						
No	0.56(0.51-0.61) ^a	0.044	0.70(0.68-0.72) ^a	0.013	0.69(0.67-0.70) ^a	0.013
Yes	Ref.	---	Ref.	---	Ref.	---
Ever used FP method						
No	0.63(0.57-0.68) ^a	0.044	0.75(0.73-0.78) ^a	0.017	0.73(0.70-0.75) ^a	0.016
Yes	Ref.	---	Ref.	---	Ref.	---
Working status						
Not working	1.01(0.94-1.08)	0.036	1.06(1.03-1.09) ^a	0.013	1.05(1.03-1.08) ^a	0.012
Working	Ref.	---	Ref.	---	Ref.	---
Residence						
Urban	1.00(0.91-1.09)	0.047	0.96(0.93-1.00) ^c	0.019	0.97(0.94-1.01) ^d	0.017

Rural Region	Ref.	---	Ref.	---	Ref.	---
Barisal	0.77(0.66-0.90) ^a	0.080	0.80(0.76-0.85) ^a	0.030	0.79(0.75-0.83) ^a	0.028
Chittagong	0.89(0.78-1.01) ^c	0.067	0.92(0.88-0.97) ^a	0.025	0.91(0.87-0.95) ^a	0.023
Dhaka	0.79(0.70-0.90) ^a	0.064	0.79(0.75-0.82) ^a	0.023	0.78(0.75-0.82) ^a	0.022
Khulna	0.70(0.60-0.81) ^a	0.076	0.66(0.62-0.69) ^a	0.029	0.66(0.62-0.69) ^a	0.027
Rajshahi	0.76(0.66-0.86) ^a	0.066	0.69(0.66-0.72) ^a	0.024	0.69(0.66-0.72) ^a	0.023
Sylhet Region	Ref.	---	Ref.	---	Ref.	---
Islam	1.14(1.02-1.28) ^c	0.057	1.12(1.07-1.17) ^a	0.022	1.11(1.07-1.16) ^a	0.021
Other	Ref.	---	Ref.	---	Ref.	---
Wealth index						
Poorest	1.28(1.14-1.45) ^a	0.063	1.21(1.15-1.27) ^a	0.023	1.22(1.17-1.28) ^a	0.023
Poorer	1.31(1.17-1.48) ^a	0.060	1.14(1.09-1.20) ^a	0.024	1.16(1.11-1.21) ^a	0.022
Middle	1.14(1.01-1.28) ^c	0.059	1.13(1.08-1.18) ^a	0.024	1.12(1.07-1.17) ^a	0.022
Richer	1.16(1.04-1.29) ^a	0.057	1.07(1.02-1.11) ^b	0.023	1.07(1.03-1.11) ^a	0.021
Richest	Ref.	---	Ref.	---	Ref.	---

Note: level of significance ^a $p < 0.001$; and ^b $p < 0.01$; ^c $p < 0.05$; and ^d $p < 0.10$.
IRR = Incidence Rate Ratio; and WCI = Wald Confidence Interval.

EXPLORATION OF FACTORS CONTRIBUTING TO EMPLOYEE ABSENTEEISM IN GARMENT INDUSTRY OF BANGLADESH: AN APPLICATION OF MULTIPLE REGRESSION MODEL

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Abstract: Each and every organization gets hurt by the negative effects of employee absenteeism which results in a drastic fall of quality and productivity. Although it is universally determined that absenteeism is detrimental to the organizational growth, factors causing employee absenteeism in the garment industry of Bangladesh are not explored at large. In this context, the researcher aimed to explore the contributing factors causing employee absenteeism in the garment industry of Bangladesh and determine their significance to suggest some recovering initiatives. Considering the geographical locations of the garment factories, the researcher chose five garment factories situated in Dhaka and randomly selected 100 respondents to administer a questionnaire survey. The questionnaire included five independent variables (Mental and physical fitness, Family responsibilities, Workplace misconduct, Unhealthy working environment and Transportation problem) as the probable determinant of absenteeism on the basis of focus group discussion, face to face interview and literature review. A five point Likert type scale was used in the questionnaire that asked respondents to rate those five probable causes of absenteeism. Then, Multiple Linear Regression Model was applied using SPSS 15.0. The SPSS outputs indicated the first three variables (Mental and physical fitness, Family responsibilities and Workplace misconduct) as significant to contribute towards employee absenteeism while the third one (Workplace misconduct) was reported as the most significant one. Finally, the researcher recommended that proper training and counseling for mental support, flexible work hours, better pay, childcare facility and better treatment showing dignity and respect for employees can ease up the negative influence of these factors to employee absenteeism in the garment industry of Bangladesh.

Introduction

Employee absenteeism has been a serious issue for the organizations all over the world (McHugh, 2002). Being absent from work at scheduled time due to any reason is referred to absenteeism Griffin et. al. (1998). Steers and Rhodes (1978) analyzed the issue more mathematically and found that employee absenteeism is a function of their motivation and their ability to attend. However, Vander and Miller (1998) found absenteeism as a destructive and uncomfortable occurrence that takes place when employees remain absent from their scheduled work hours.

Researchers from different academic fields have contributed to unveil the factors contributing to the reason why employees remain absent from work and the consequences of absenteeism to the organization and to the economy as a whole. Many well known researchers like Chadwick-Jones et al. (1982), Terborg et al. (1982), Banham (1992), Hodson et al. (1993), Muir (1994) and CBI (1999) have found that absenteeism has

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spread like viral infection and cost a large amount of money to the organization. In this regard, IDS (1998) estimation showed that absenteeism costs £13 billion a year to UK economy that averages £581 per employee. Another statistics from CBI (1999) revealed that in 1998, nearly 200 million working days were lost due to employee absence that averages 85 working days per employee constituting 3.7% of working times. However, all these estimates were related to direct costs but the scenario becomes dreadful when indirect costs like poor quality, reduced customer satisfaction and future business losses are added. Ho (1997) argued that economic impacts from employee absenteeism derive primarily from the cost of reduced productivity due to absence, less experienced replacements and additional costs of hiring substitutes. Thus, absenteeism has a double fold effect to the organization and the national economy.

Now, considering the perspective of Bangladesh, it is well recognized that readymade garment is one of the major exporting items and this readymade garment industry faces a lot of trouble due to employee absenteeism. This particular research will try to unveil the factors contributing to employee absence at garment factories in Bangladesh and provide some recommendations to ease the severity of this problem.

Objectives of the Study

The main objective of this study is to identify the factors behind absenteeism in garment industry of Bangladesh. To achieve the main objective, the researcher has set up the following specific objectives:

1. To identify personal factors related to employee absenteeism.
2. To ascertain organizational factors related to employee absenteeism.
3. To assess the degree of contribution of each of those factors in employee absenteeism.
4. To provide recommendations to ease the severity of employee absenteeism in garment industry of Bangladesh.

Literature Review

Employee absenteeism is a hard subject to explore as different researchers have approached this issue from different perspective. However, researchers have found that health or fitness can be a probable cause of employee absenteeism. Some other papers have shown emphasis on the work environment as a contributing factor of absenteeism. Steers and Rhodes (1978), for example, suggests that employees' attendance is a function of their motivation and their ability to attend. Providing supports to Steers and Rhodes (1978) several researchers indicated that employees may be motivated to attend by increased autonomy, responsibility, job satisfaction and organizational commitment (Dalton & Mesch; 1990, Rentsch & Steel; 1998). Findings of these researchers have been taken into consideration by Saratoga (1998) arguing that high employee absence, from a management perspective, refers to organizational mis-conduct resulting disaffection from the employees who have been recruited for taking decision through analysis.

Difficult and monotonous jobs weaken both the physical and psychological boosts of the employee who then starts remaining absent from work (Steers and Rhodes, 1978). Working condition of unhealthy and uncomfortable nature can be a major cause behind employee absenteeism (Cooper, 1994).

It is true that employees are required to travel a lot due to distant work place or factory to work in. In such kind of situation employees are unable to reach their destination due to unavailability of transport facility from the organization. Thus, it is particularly true that transport problem can result in employee absenteeism (Drago & Wooden, 1992).

Researchers have also found that family responsibilities deter employees to be present at workplace in due time (Swain & Mohanty, 1997). Uncomfortable and boring job can be a major cause of employee absenteeism (Drago & Wooden, 1992).

The discussion above proves that there are several factors that lead to employee absenteeism in modern day organization including mere excuses like bad weather, poor supervision, ill pay accident, sexual harassment to females, employee demography (age, marital status) etc. The literatures can be summed up to classify the causes behind employee absenteeism as under;

Personal Factors

- i) Mental and Physical Fitness
- ii) Childcare Issue
- iii) Inability to perform
- iv) Responsibility towards Family
- v) Disinterest in work
- vi) Age
- vii) Marital Status

Organizational Factors

- i) Workplace misconduct
- ii) Boring and uncomfortable job
- iii) Work stress
- iv) Unpleasant working condition
- v) Inadequate supervision & Poor Control
- vi) Accident
- vii) Work relationship
- viii) Sexual harassment

Other Factors

- i) Insufficient transportation facilities
- ii) Unpleasant weather condition

All these factors have contributed to employee absenteeism in organizations all over the world. Now, in this particular paper these factors will be explored in relation to their contribution to employee absenteeism in the readymade garment industry in Bangladesh.

Methodology

Dhaka city was intentionally chosen to collect the primary data since the majority of the garment factories are located in the city. A sample of five garment factories has been randomly selected which are Allure Apparel Ltd, Alpha Fashion (Pvt) Ltd, Goldcity Garments Ltd, Ishita Garments and Jamuna Knit Fashion Ltd. The final sample of respondents constituted 100 employees including 20 randomly selected subjects from each of the chosen garments. Out of the 20 respondents, 2 were taken from Floor In-charge level, 3 were from Line In-charge level, 4 were from operator level and 11 were from helper level.

Last six month period has been considered to collect absenteeism data from the factory register while a questionnaire survey has been conducted where a five point Likert type

scale has been used to ask employees rate five independent variables from the lowest (1) to the highest (5) degree of significance on employee absenteeism. The methodology of this research paper examines the problem of employee absenteeism as the dependent variable (Y) while the independent variables (X) or probable causes of employee absenteeism have been selected from focus group discussions, face to face interview of garment management and available literatures. Focus-group discussions were:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Where, α = the intercept (constant),
 $\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 = Coefficients to
 independent Variables and e = error term
 assumed to be zero.

Last six month period has been considered to collect absenteeism data from the factory register while a questionnaire survey has been conducted where a five point Likert type scale has been used to ask employees rate five independent variables from the lowest (1) to the highest (5) degree of significance on employee absenteeism. The methodology of this research paper examines the problem of employee absenteeism as the dependent variable (Y) while the independent variables (X) or probable causes of employee absenteeism have been selected from focus group discussions, face to face interview of garment management and available literatures. Focus-group discussions were administered 15 working level employees like helpers and operators. Face to face interviews were administered on 5 supervisory level employees to find out the causes of employee absenteeism from their experience and observation. Additionally, the literature review section has already produced some expert opinions on employee absenteeism. Considering all these contributory sources this particular research has chosen five independent variables as factors contributing to employee absenteeism in the readymade garment industry of Bangladesh as shown below:

X_1	=	Mental and physical fitness
X_2	=	Family responsibilities
X_3	=	Workplace misconduct
X_4	=	Unhealthy working environment
X_5	=	Transportation problem

The researcher used a multiple regression model;

Analysis and Discussion

The questionnaire survey was administered with 100 respondents and the results have indicated that 63 percent were female while 37 percent were male. However, the majority of the respondents (38%) fell into the 20-24 years age group (40% male and 60% female); while the minority of the respondents (10%) fell into 15-19 years age group. (Please refer to Table 1).

Table 1: Age * Sex Cross tabulation

			Sex		Total
			Male	Female	
Age	15-19	Count	3	7	10
		% within age	30.00%	70.00%	100%
		% within sex	8.11%	11.11%	10%
	20-24	Count	15	23	38
		% within age	39.47%	60.53%	100%
		% within sex	40.54%	36.51%	38%

25-29	Count	5	13	18
	% within age	27.78%	72.22%	100%
	% within sex	13.51%	20.63%	18%
30-34	Count	8	10	18
	% within age	44.44%	55.56%	100%
	% within sex	21.62%	15.87%	18%
35 and above	Count	6	10	16
	% within age	37.50%	62.50%	100%
	% within sex	16.22%	15.87%	16%
Total	Count	37	63	100
	% within age	37.00%	63.00%	100%
	% within sex	100.00%	100.00%	100%

The researcher applied SPSS (Version 15.0) to run the regression model on the primary data collected through the questionnaire consisting five independent variables to employee absenteeism and the results depicted in the Table-2 prove that only the first three variables (Mental and physical fitness, Family responsibilities and Workplace misconduct) are significant factors causing employees remaining absent from work.

Table 2: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	35.134	2.812		13.123	.000
Mental and physical fitness	-2.701	.713	-.301	-3.011	.006
Family responsibilities	-1.871	.632	-.284	-3.352	.003
Workplace misconduct	-2.960	.581	-.513	-5.074	.001
Unhealthy working environment	4.739E-05	.472	.001	.010	.874
Transportation problem	-.187	.479	-.003	-.383	.713

a. Dependent Variable: Absence in days/6 month

As t values were insignificant for the other two variables; unhealthy working environment and transport problem (.010 and -.383 respectively), the researcher eliminated these two variables from the regression model and ran it again to produce the following results;

Table 3: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	34.312	2.810		18.121	.000
Mental and physical fitness	-2.073	.681	-.298	-3.148	.004
Family responsibilities	-1.926	.559	-.293	-3.898	.001
Workplace misconduct	-2.887	.579	-.512	-5.417	.000

a. Dependent Variable: Absence in days/6 month

Table-3 clearly indicates the coefficients of the regression line for all of the three independent variables since their corresponding t-values sufficient to prove their

significance as factors of employee absenteeism. Thus, the regression line equation becomes;

$$Y (\text{Absenteeism}) = 34.31 - 2 (\text{Mental and physical fitness}) - 1.93 (\text{family responsibilities}) - 2.89 (\text{Workplace misconduct})$$

The researcher also produced a model summary table (Table-4) to indicate the strength of the relationship between the dependent variable, absenteeism and the regression model. In table-4, the value of multiple correlation coefficients (R) has been found quite high (0.87) which indicates a highly significant correlation between the dependent and independent variables in the model.

Table 4: Model Summary^b

Model	R	R Square	Adjusted R Square	Std Error of the Estimates
1	.871 ^a	.703	.712	3.94

a. Predictors: (Constant), Mental and physical fitness, family responsibilities, Workplace misconduct

b. Dependent Variable: Absence in Days/6 Month

However, the model is found to be successful in explaining more than seventy percent of the variation in the dependent variable as the Coefficient of Determination (R Square) is .703 with, in the model summary table-4 minimum standard Error of the estimate (3.94).

The model is also found statistically acceptable as the ANOVA table (Table 5) shows favorable results both in the **Regression** row confirming a successful explanation of about 70% of the variation in absenteeism and the **Residual** row confirming only 30% of the variation being not explained.

Table 5: ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1910.173	3	636.72	42.84	.000 ^a
	Residual	847.164	57	14.86		
	Total	2757.247	60			

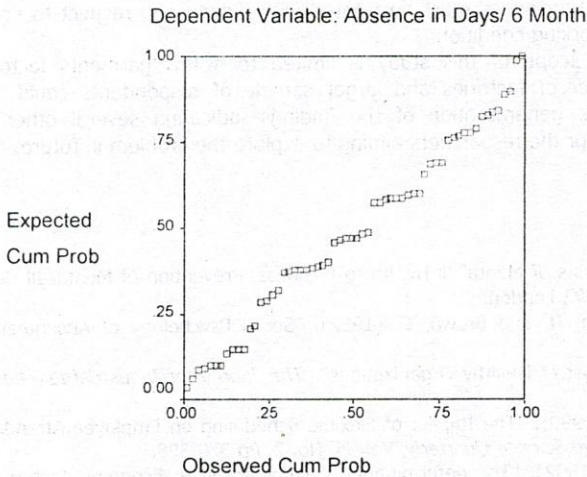
a. Predictors: (Constant), Mental and physical fitness, family responsibilities, Workplace misconduct

b. Dependent Variable: Absence in Days/6 Month

Again the significance value of the F statistic is less than 0.05 indicating the variation in absenteeism explained by this regression model did not take place by chance or coincidence.

Figure 1

Normal P-P Plot of R egression Standardized Residual



The researcher plotted the P-P residuals (Figure 1) to test the normality assumption of the error term in relation to the established model. Residual refers to the difference between the observed and model-predicted values of the dependent variable. Since the P-P plotted residuals followed the 45 degree line, the normality assumption of the error terms of the model has been successfully proved.

Conclusion and Recommendation

The study in particular has tried to explore the factors playing key roles in employee absenteeism in the readymade garment industry of Bangladesh. Although there have been a lot of personal and organizational factors leading to employee absenteeism, this paper chose only the most probable five factors in the context of Bangladesh, which are Mental and physical fitness, Family responsibilities, Workplace misconduct, Unhealthy working environment, and Transportation problem. However, the study finally concluded that mental and physical fitness, family responsibilities and workplace misconduct have significant negative relation with employee absenteeism, while unhealthy working environment, and transportation problem were not found to be so significant as thought during the focus group discussion. On the basis of the study findings the researcher recommends the following initiatives to ease the problem of absenteeism in the readymade garment industry of Bangladesh;

1. Organizations will stumble if their employees remain mentally and physically unfit resulting poor quality and reduced productivity. Thus, they should give top most priority to ensure mental and physical fitness of their employees. In this regard, they can offer flexible working hours and proper rest time to their employees. Additionally, they can counsel or train up their employees and make them aware to fight with mental stresses and physical hazards and remain fit.
2. As the majority of the garment workers are female, they remain cautious about their family responsibilities causing a regular absenteeism problem. To ease up this factors,

organizations can offer better pay scales along with childcare facilities for their employees.

3. Garment workers are often poorly treated and humiliated by their supervisors, which exerts a negative impact on them to attend their work. In this regard, organizational policies should be revised to ensure dignity to the workers and prevent all sorts of misconduct with them. Employees must be treated with dignity and respect to ensure safe and comfortable working condition.

It is obvious that the scope of this study is limited to a few garments factories. Therefore, more number of factories and larger sample of respondents could have produced more credible generalization of the findings indicating several other key factors to absenteeism for the researchers aiming to explore the problem in future.

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ANTECEDENTS OF CUSTOMER SATISFACTION FOR ONLINE NEWS READERS: THE BANGLADESH PERSPECTIVE

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Md. Mohiuddin

Abstract: The popularity of online news reading has been increasing across the world with the launch of ICT technology in publishing and delivering news. This paper discusses the e-satisfaction of online news readers in Bangladesh. Five online news media have been considered in this study. This paper is based on primary data. Structured questionnaire has been used to collect data. Judgment sampling method has been used to select respondents for the survey. Results indicate that online news reading in Bangladesh has reached an average level in terms of audience size, although penetration of this industry is still concentrated in the upper socio-economic segment of the society. Satisfaction of online news readers depends on some factors as they are identified in this study. The satisfaction level of news readers is still below the average level for most of the variables studied in this research. The findings can provide better understanding of the news publishing companies to flourish the industry in Bangladesh.

Introduction

Global publishing industry is experiencing turmoil passing, as broadband penetration rises and new devices for delivering digital content arrive on the scene. News readers are increasingly switching from traditional print media to digital media for many reasons, although this shift varies across age, sex and nationality. Today, newsreaders enjoy the benefits of new media—the e-paper which is based on electronic linked technology. E-link technology gives a visual impression close to printing paper. This new technology is being welcomed by news publishing companies with the potential of reducing high production and distribution costs in the newspaper industry. Despite all expected advantages of e-news, it will probably not be easy to replace the printed edition since readers often stick to their experienced ways and behaviors to read newspapers even at their coffee table.

Online news is characterized by electronic devices—multimedia, interactivity, and hypertext that can represent a dynamic, information-rich environment (Oppeghaffen, 2011); it

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presents up-to-date information about local and international events, sports, financial trends and popular stories. Online news attracts wide-range of people with different motivations for browsing and reading news, including scrolling news, breaking news, or general information about what is happening in the current world (Marshall 2007). To motivate readers, online news providers incorporate interactive features into their sites to build positive image in news readers' mind that can be part of their news experience (Opgenhaffen, 2011). Individual interests and motivations are also influencing factors for reading interactive news features (Flavián and Gurrea, 2009) which can reduce readers' dissonance; yet Chung (2008) argues that interactivity may not be a sufficient construct for understanding the complexity of online news interactions. With the vast archiving capabilities, it has become possible to stay connected with Internet overtime as well. Old newspapers may be forgotten but old news does survive – in online archives. Old news archives are available in digitized formats, therefore, old news articles and newspapers can be seen in their original formats. The information of Internet brought new kind of lifestyle to news readers and subscribers. The feature of Internet as a news medium seems promising because online news readers do not need to pay much for it, have more news choices on the Internet, can look for in-depth and background information they want, can look for updated news whenever they want, can get news tailored to their interest only, can express their opinions to the news media. These benefits in many regards depend on some factors such as archive options, news classification, download speed, costs, search option, opinion giving option and many other things related to online news media.

Newspapers have been published for centuries. However, we have experience of web based news reading in Bangladesh for only a decade. Currently, most of the newspaper publishers are using this technology. Web based media are also used for personal and social communication such as e-mail, face book, twitter and e-blogs. All these news media are creating strong appeal to the newsreaders because of its benefits—time and cost effectiveness, receiving immediate feedback, sharing with others and time management in reading e-news. But the benefits of e-news can not be properly sought due to poor level of ICT infrastructure in Bangladesh. Considering issues of e-news, this paper analyzes the current situation of online news reading in Bangladesh and readers' level of satisfaction with the factors related to online news. This paper attempts to highlight the issues needed to improve our understanding about online news publishing and its delivery to the online sources and to improve readership quality.

Service markets across the world are getting more and more competitive. Online news market has been experiencing emergence of new news media and information center, development of new services, technological advances and appliances, and changes in preferences of customers. These shifts in news market call for designing and redesigning need-based services to satisfy customers and thereby enjoy their loyalties. In this competitive age, customer satisfaction and retention, revenues, cost of doing business are key factors in firms' profitability. Like other businesses, customer satisfaction has become

the central issue for online service providers as well as policy makers. Existing literature suggest that our understanding about the relationship between customer satisfaction judgments and service quality perceptions still remain a problematic area (Taylor and Baker, 1994). A stream of research on customer satisfaction has argued that satisfaction judgments are casual antecedents for service quality judgments (Binter, 1990; Parasuraman, Berry and Zeithaml, 1993). Literature supports that service quality, expectations, disconfirmation, performance, desires, affect and equity are the determinants of customer satisfaction (Churchill and Suprenant, 1982; Glen, Parasuraman and Grewal, 1998; Levesque and McDougall, 1996; Szymanski and Henard, 2001). Online news concept is commonly used in many of the developed countries. Customer satisfaction and quality of news presentation of online news have not been studied widely in developing countries specially in Bangladesh. It is yet to be examined how news readers are accepting the ways of news presentation using Internet.

Literature Review

News has been studied by researchers in many disciplines such as human-computer interaction (HCI), media studies, and communications. Previous researches in HCI and media studies have focused on users' motivations for reading online news (Flavián and Gurrea, 2009; Marshall, 2007) and their desire for choices of novelty (Toms, 2000) when selecting news content. Studies have identified the need to support different types of reading and browsing behaviors (Sakagami and Kamba, 1997) and collaborative filtering (Konstan, Miller, Maltz, Herlocker, Gordon, and Riedl, 1997) in the design of news interfaces. News has been studied based on information behavior (Elsweiler, Wilson and Lunn, 2011). Marshall (2007) describes how readers may approach news, either rapidly scanning to get a general sense of the overall content, or engaging in more in-depth, focused reading of specific news items. In addition to examining people's motivations for reading news and their preferences for browsing news websites, some other writers have focused on users' perceptions of interactive (Chung, 2008; Deuze, 2003) and personalized (Lavie, Sela, Oppenheim, Inbar and Meyer, 2010) news interfaces. Studies have also tried to account for and satisfy the varied interests of newsreaders through personalization (Lavie, et al., 2010); they have untapped potential for transforming the ways in which news is delivered and consumed (Oppenhaffen, 2011). Therefore, capturing the experience of online news interactions requires a more holistic way of thinking about information behavior in this context – a perspective that encapsulates not only usability, but also "enjoyability" (Chen and Corkindale, 2008).

Earlier researches have concentrated on news presentation format and news platforms, readers' motivation and perception, browsing behavior of the online news readers, information scanning and filtering from the news media. However, customer satisfaction and quality of service for online news readers have not studied much even in global context. This study tries particularly to identify the key factors to measure satisfaction level of online newsreaders, which has not been studied so far in developing countries like Bangladesh or elsewhere.

Methodology

This study has been conducted to investigate the market for online news media in Bangladesh with a view to measuring the readers' satisfaction with online news. This study covers a wide range of news and information readers who use www sites.

Sources of Data

The study is mainly based on primary data collected with questionnaire survey. A good number of published and unpublished materials have also been reviewed to support the arguments in this paper. The primary data have been collected from the respondents who usually browse online sources for reading news. Secondary data have been collected from journal articles, newspaper articles, books, and other published and unpublished materials.

Sampling of the Study

To collect data, the researchers selected five online news media, namely online news papers, face book, e-blogs, twitter and e-mail. Students and teachers of Rajshahi University who read news from the various online news media are being considered as sample for the study. The study selected 50 respondents for survey. Each of the respondents is selected on judgment basis because there are many individuals of Rajshahi University who do not know online system or are not interested in reading online news.

Questionnaire preparation and data collection

A structured questionnaire incorporating important variables which particularly affect the satisfaction level of online news readers. Much care was taken about question phrasing, wording, time of answering, ambiguity, and dual statement of answering. Moreover, a piloting was done before finalization of the questionnaire. There have been 20 different variables used for measuring satisfaction of online news, each of which contains five point Likert Scale ranging from strongly unfavorable (0) to strongly favorable (4). Researchers used personal face-to-face interview method to collect data. Small group of interviewers was appointed to collect data. Before commencing data collection, each of the interviewers was well briefed about each individual question.

Data Analysis

After collecting data, individual questionnaire has been edited, coded and properly preserved. To analyze the collected data; SPSS software has been used. Descriptive statistics such as percentage, mean and SD have been calculated to know the trend of data. Correlation among the variables has also been used for satisfaction measurement.

Results and Discussion

Current situation of online readers

Online news reading concept is not generally known to the newsreaders of Bangladesh. A decade ago, just one-in-fifty newsreaders had the scope to read online newspapers. This scenario has been changed over the last few years due to rapid expansion of Internet technology in urban areas of the country. However, this news broadcast outlet continues under struggle over the last few years due to wide spread of Satellite TV stations which maintain frequent schedule to present news every day. The discrete online-only newspaper audience is quite modest in size. Our study finds that four-in-ten persons read a newspaper online. In addition, 3% respondents say that they read something from local or national newspapers' website. Respondents say, they need to spend about half an hour on the Internet for getting online news. This time is significantly less than the average time spent for print-newspaper readers, radio news listeners or TV news viewers. It is also found that nearly 48% spend at least 30 minutes getting news on television, and just 9% spend longer time span for getting news online.

Online news consumers emphasize on speed and convenience over detail of the online news media. Of the 23% who get news from online sources, only a small portion visits newspaper websites. To some degree attention of news consumers are drawn to the online source for the very reason that it does not take much time to get news. Most of the respondents prefer the distinguishing features of online news such as its format and accessibility, ease of navigation and speed with which information can be gathered, and convenience at the fingertips of the readers. Convenience is a factor for newspapers and television as well, but more readers and viewers refer to the subject matter and journalistic and editorial qualities of the content.

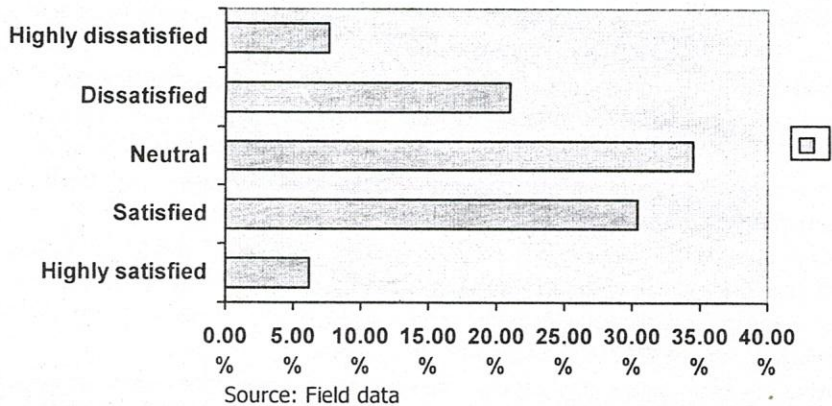
The views and habits that continue to constrain the size of news audience are shared widely among younger people. Nearly half (46%) of those who do not get a great deal of enjoyment from keeping up with news are under the age of 40; similarly, 49% of those who check in with the news from time to time, rather than get the news at regular times are also under 40 years old. The growth of internet news has stalled among the young people. A significant number of young people (13%) use mobile technology such as cell phone, PDA and iPod to get news online.

The overall perception towards online news

The concept of online news readership is still in the introductory stage in Bangladesh. Newsreaders are not generally familiar with the way of reading news from local, national or international newspapers. We have identified some variables that are related to online news reading; and have measured satisfaction level of Bangladeshi news readers. It is found that majority of the respondents (34.5%) become neutral in their response that means they are neither satisfied nor dissatisfied with online news. A good number of respondents (30.5%) are satisfied, whereas 21% are dissatisfied. However, the scenario of both extremes is surprising—*e.i.*, highly dissatisfied (7.8%) and highly satisfied (6.2%).

These results show that the overall satisfaction of online news readers is near the average level.

Figure1: Scenario for online news readers' satisfaction/dissatisfaction



Later, the mean score and standard deviation of measuring variables of online news readers in Bangladesh were calculated and presented in Table 1. It is found that the mean score (2.76) of *reading message from face book* is the highest ranked with minimum standard deviation. This result means that online news readers are satisfied as an above average level satisfaction with the face book news. The next useful variable is *e-mail news* that has also an above average mean score (2.5). It is also found that the poor mean score goes to *download speed* (1.54), *linking option* (1.8) and *online option* of some event (1.9), which means the satisfaction level of online news readers of Bangladesh is below the average on these three aspects. Though there is a growing trend towards online news reading in Bangladesh, data show that the news readers' satisfaction level is still average. We have identified which one of the observed variables has the higher level of satisfaction. Data show that respondents are mostly satisfied with reading message in face book media. From the data, it is observed that respondents' satisfaction level is low for download speed, search option, loading image and archive option. News companies should look into the issues related to the preference of online news readers to improve the current conditions in Bangladesh.

Considering the results of Table 1, it is noted that respondents are satisfied at an average rate towards various online news media—newspapers, face book, twitter, e-mail and, e-blogs when they browse and read message from these pages. Most of the readers in the online newspapers concentrated on the font size, archive options and other online newspaper links. In this case they also have suggested some measures to overcome their problems regarding individual attention. In e-mail message, respondents prefer high speed that will save time and cost for the browsers. Twitter also helps the readers like e-blog but respondents are facing some restrictions in using the twitter for making comments. Face book as a social media has got clear acceptance to the respondents. However, respondents argue against various unethical practices of cyber consumers.

Table 1: The overall perception towards online news

Variables	Frequency					Mean	Stand ard Deviat ion	Ra nk
	Strongly unfavorable	Unfavorable (1)	Neutral (2)	Favorable (3)	Strongly favorable (4)			
Reading message from face book	0	6	10	24	10	2.76	0.92	1
Reading message from e-mail	2	6	12	25	5	2.5	0.97	2
Cover story in online newspapers	1	11	13	15	10	2.44	1.11	3
Data transferring in the e-mail	2	8	11	26	3	2.4	0.97	4
Cost involvement	0	14	11	19	6	2.34	1.02	5
Design of Information	2	6	18	23	1	2.3	0.86	6.5
Reading message from e-blogs	1	9	18	18	4	2.3	0.93	6.5
Link with other web site	2	11	14	20	3	2.22	1.00	7
Data transferring in the web	2	8	20	18	2	2.2	0.90	8
Reading message from twitter	3	7	20	18	2	2.18	0.94	9
Making comment on e-blogs	2	8	25	10	5	2.16	0.96	10
Updated information	4	10	13	21	2	2.14	1.05	11
Archive option	4	5	27	10	4	2.1	0.97	12
Communication in the web	2	14	15	17	2	2.06	0.98	13.5
Convenient service place	8	6	15	17	4	2.06	1.20	13.5
Loading image or picture	1	18	14	13	4	2.02	1.02	14
Search option	3	11	25	9	2	1.92	0.9	15
Online options about some events	3	14	21	9	3	1.9	0.97	16
Linking option with other newspapers	7	16	11	12	4	1.8	1.20	17
Download speed	7	20	14	7	2	1.54	1.03	18

Source: Field data

Relationship between the variables studied

The researchers have attempted to measured correlation among the variables considered for the study. It has found that the variables studied in this study are either positively or negatively correlated which indicate that variable selection is appropriate for this study.

Table 2 shows that a good number of variables is correlated among each other at 1% level of significance. Among all variables *archive option* of online news has the highest level of significant relationship with other variables. However, no significant negative correlation is found. From this result, it can be said that archive option is the most important variable for online news.

Online news reading is principally based on Internet. News operators should work on building positive image towards online news by the various means of promotion. Data show that the downloading speed secures the lowest mean score which indicates that news customers are not satisfied with the download speed. Online news readers usually want to spend less time for this purpose, so a high speed Internet service is always demanded. This variable is highly important to flourish online news reading in Bangladesh. However, increasing download speed is not under the control of news publishing company. Government and independent Internet operators' roles are vital in this connection. Another important aspect of increasing online news readings is how wide-spread Internet facilities are in the rural areas. The availability of electricity is also important for the sustainability of Internet services. So, there is a spiral relationship among Internet, available electricity and download speed. This study has identified poor downloading speed for online news reading but it is a generic problem. Electricity and Internet system of Bangladesh is primarily based in the urban areas. The government should concentrate on building Internet infrastructure that could even reach the remote areas of the country. The cost of visiting w.w.w. sites should also be under consideration for the news providers.

Conclusion and recommendation

All factors included in this study have more or less impact on e-satisfaction for online news readers. However, there are some problems associated with these variables. Online news readers have appreciated the way Bangladeshi online news media is going. However, they are lag far behind the international standard. To raise it to an international standard, online news companies should add more options like— link to other website and effective search option and high speed downloading facility. Online news industry hopes that its growing acceptance by the online news readers is observed. Both readers and publishers are happy to shift from conversational format news to online news. Now-a-days online newspaper designers think that it is the best way to positioning their brand image in the news market. Future research can assess the benefits of online news for the readers, for the society and for the country as well.

However, it is not easy to flourish online news reading in Bangladesh due to the current literacy rate and level of technology adaptation. So, focus should be given to the specific segments; and different online products are to be developed for different segments of readers. The concept of readers' satisfaction should be replaced by readers' reaction towards various online news offerings. In its every offering, the image quality can attract readers to visit a particular site. That can be the way to increase readers' satisfaction.

Online readers prefer to share their ideas and views with other members. Each media can introduce chat room for their readers.

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Table 2: Spearman Rank Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1.00																			
2	0.2 (.17)	1.00																		
3	.19 (.19)	.43** (.00)	1.00																	
4	.02 (.88)	.21 (.15)	.10 (.48)	1.00																
5	.19 (.18)	.27 (.06)	.28 (.05)	.26 (.07)	1.00															
6	.23 (.11)	.22 (.03)	.31* (.03)	.29* (.04)	.23 (.11)	1.00														
7	.30 (.03)	.10 (.48)	.18 (.21)	.11 (.47)	.17 (.23)	.21 (.15)	1.00													
8	.12 (.41)	.19 (.15)	.25 (.09)	.25 (.09)	.25 (.08)	.49** (.00)	.05 (.73)	1.00												
9	.06 (.69)	.22 (.12)	.50** (.00)	.27 (.06)	.31* (.03)	.19 (.21)	.33* (.02)	.12 (.40)	1.00											
10	.12 (.39)	.22 (.12)	.20 (.48)	.16 (.26)	.06 (.67)	.35 (.11)	.07 (.31)	.16 (.65)	.05 (.71)	1.00										
11	.05 (.74)	.04 (.78)	.28* (.05)	.29* (.04)	.25 (.04)	.44** (.00)	.19 (.31)	.34** (.02)	.15 (.31)	.15 (.60)	1.00									
12	.18 (.21)	.07 (.61)	.38** (.01)	.10 (.51)	.17 (.23)	.02 (.90)	.18 (.20)	.06 (.86)	.17 (.24)	.10 (.47)	.10 (.76)	1.00								
13	.02 (.90)	.26 (.07)	.17 (.23)	.22 (.13)	.25 (.08)	.37 (.06)	.14 (.41)	.05 (.71)	.21 (.14)	.27 (.07)	.25 (.06)	.25 (.08)	1.00							
14	.19 (.18)	.40** (.00)	.33* (.02)	.29* (.04)	.24 (.10)	.36 (.07)	.01 (.96)	.45** (.00)	.11 (.46)	.14 (.33)	.19 (.09)	.19 (.18)	.21 (.15)	1.00						
15	.12 (.42)	.03 (.86)	.25 (.08)	.15 (.30)	.17 (.23)	.46** (.00)	.04 (.81)	.20 (.17)	.30* (.04)	.19 (.24)	.24 (.07)	.26 (.12)	.17 (.38)	.13 (.38)	1.00					
16	.01 (.97)	.06 (.20)	.13 (.41)	.02 (.88)	.02 (.88)	.02 (.95)	.07 (.62)	.13 (.37)	.07 (.64)	.10 (.50)	.12 (.41)	.04 (.80)	.08 (.58)	.12 (.40)	.08 (.58)	1.00				
17	.04 (.94)	.38* (.05)	.30** (.00)	.47** (.00)	.31** (.03)	.42** (.00)	.06 (.69)	.37** (.01)	.18 (.22)	.18 (.21)	.46** (.00)	.05 (.74)	.26 (.07)	.29* (.17)	.02 (.88)	.07 (.83)	1.00			
18	.01 (.94)	.15 (.31)	.04 (.79)	.28* (.05)	.05 (.72)	.05 (.72)	.05 (.75)	.02 (.90)	.02 (.90)	.16 (.27)	.00 (.99)	.00 (.99)	.05 (.71)	.04 (.77)	.09 (.53)	.09 (.53)	.20 (.17)	1.00		
19	.16 (.28)	.09 (.52)	.11 (.45)	.11 (.46)	.13 (.45)	.03 (.45)	.03 (.43)	.24 (.09)	.22 (.13)	.15 (.28)	.05 (.76)	.06 (.68)	.06 (.66)	.08 (.67)	.08 (.60)	.08 (.60)	.49** (.00)	.14 (.34)	1.00	
20	.08 (.38)	.03 (.83)	.08 (.43)	.11 (.45)	.05 (.45)	.08 (.45)	.08 (.45)	.18 (.20)	.15 (.31)	.14 (.31)	.19 (.18)	.03 (.82)	.20 (.17)	.03 (.83)	.22 (.13)	.18 (.21)	.22 (.13)	.22 (.13)	.24 (.09)	1.00

Note: *Correlation is significant at the 0.05 level, **Correlation is significant at the 0.01 level. Figures in the parenthesis indicate p-value. N = 50

Here, 1= Download Speed, 2= Updated information, 3= Design of information, 4= Loading image or picture, 5= online options about some events, 6= Reading messages from e-mail, 7= Reading messages from facebook, 9= Reading messages from twitter, 10= Linking option with other newspapers, 11= Search option, 12= Link with other web site, 13= Communication in the web, 14= Data transferring in the web, 15= Data transferring in the e-mail, 16= Cover story in online newspapers,

Source: Field Data

CONSUMERS' PERCEPTION OF FAST FOOD IN RAJSHAHI CITY

Murshida Ferdous Binte Habib*
Farzana Quoquab Binte Habib

Abstract: This paper presents the findings of a study which was designed to determine the consumer's perception of fast food in Rajshahi city. For this purpose, 200 consumers (135 males and 65 females) were selected from 4 different outlets of Rajshahi City Corporation. The respondents were the students of universities and colleges of Rajshahi and their age ranged from 18 to 25 years. A semi-structured questionnaire was administered on the sample to collect data. The results revealed that consumers like to have fast food and go to fast food outlets for various reasons. They also expressed their perception of price, quality and palate of fast food. The perception of ambience and hygiene of fast food outlets was also determined by the questionnaire survey. However, the results of the study can serve as a platform to carry on more systematic and precise research on this issue. Finally some of the limitations of the study have been mentioned for the future researchers.

Introduction

With the rapid change in lifestyle of people in Bangladesh significant changes have taken place in our food habit and taste during the 1990s. According to Goyal and Singh (2007), fast food is the world's fastest growing food type and it is quick, reasonably priced and readily available alternatives to home cooked food. Because of busier urban consumer lifestyle and dual working nuclear family, emphasis is increasingly being placed on quick meal solutions (Atkins & Bowler, 2001; Hanson, 2002) as people can combine meal-time with other activities such as shopping, work, and travelling (Jekanowaski et al., 2001). However, young generation of this age are now becoming prone to different types of food, particularly, fast food due to the touch of western culture, among other causes. Moreover, people experience excitement, pleasure, and a sense of personal well-being by taking fast food in a restaurant (Finkelstein, 1989; Park, 2004).

Nonetheless, the consumption of fast food is restricted to the urban people as people in the rural areas are not yet adapted to the preparation and taste of this type of food. It is still perceived as expensive. Food-away-from-home consumers are more educated, younger, and have higher-paying jobs and high household incomes (Brown, 1990; Byrne et al., 1996, 1998; Ekelund and Watson, 1991). Although the older people even in the urban areas do not consider fast food as a part of Bengali culture, the younger people have developed a liking for it, almost to the level of addiction for it. of this millennium have welcomed fast food easily. As a result local food manufacturers have come forward to sell fast food in the market. Since there is no multinational fast food company or its franchise

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owned restaurant in Rajshahi city, some local companies have come forward to meet the demand of fast food of this area like other parts of the country.

The fast food restaurant is one typical form of global business (Emerson, 1990; Park, 2004). The trend of fast food consumption is undoubtedly high in the western countries. Schlosser (2001) mentioned that a greater volume of fast food is consumed in the UK than in any other country in Europe. It is also getting popular even in developing countries like India and Pakistan. According to the findings of the recent online survey by AC Nielson (2005), India being at the seventh place, is among the top ten markets for weekly fast food consumption among the countries of Asia-Pacific region. Kara et al. (1995) has presented the consumers' perceptions of and preferences for fast-food restaurants in the US and Canada. According to their study, the consumers between 12 and 24 years of age look for variety, price, delivery service and location in America, and for price and novelties in Canada. In the age group of 46 to above 55 years, cleanliness, nutritional value, quality and taste are considered by Americans and preference is given to nutritional value and seating capacity by Canadians in identifying fast food restaurants. In the age group of 25 to 45 years, Americans preferred for speed and friendly personnel whereas Canadians looked for speed, quality and service. Brown et al. (2000) emphasized the need for nutritional awareness and fast food preferences of young consumers during adolescent years. Findings of a recent study in Malaysia revealed that expenditure for fast food mostly goes to fried chicken, while instant noodles are the least consumed item. Moreover, food safety, speeds in delivery and food taste suitability have been found as the main influential factors for purchasing of fast food. On the contrary, quality, freshness, ease of cooking, and cleanliness are the second priority. Furthermore, 'Halal' status has been indicated as the most important factor for the Muslim consumers (Habib et al. 2011).

Despite its growing importance, fast food chains have not received sufficient attention in the academic literature. However, in recent years research has been carried out on nutritional value and sensory and hygiene quality of fast food. The nature of food production and processing is becoming more important to consumers (Baltas, 2001; Bredahl et al., 1998). A survey of more than 9000 consumers nationwide in the US has shown that about 25 percent of those who eat fast food and drink sugary, carbonated soft drinks generally consume more calories, fats, carbohydrates, added sugars and proteins than those who do not (Bowman, 2005). Nayga and Capps (1994), analyzed the impact of socio-economic and demographic factors on individual intake of saturated fat and cholesterol from fast food and food at home markets. According to the study of McNeal et al. (1980), respondents felt that fast foods were moderately nutritious and a good food buy, but they were fattening and contained harmful additives. These findings further indicate that although the consumers perceive the nutritional aspects of fast food meals to be important, they often ignore the aspects in practice. Adams' (2005) argue that fast food industry is responsible for obesity, based on the arguments articulated in litigation against fast food chains in the US. Recent news article by Barker (2006) indicates that Indians are facing the problem of obesity and among kinds fast food is one of the reasons for the same.

Although all these studies overlooked the impact of socio-economic characteristics of households on fast food expenditures, little is known about the characteristics of consumers who prefer to consume food at fast food restaurants, their attitudes towards price and health, and the effects of the youngsters' preference on fast food consumption. For example, Law et al. (2004) showed that staff attitude, food quality and variety and environment significantly affect customer satisfaction in fast food outlets. Pettijohn et al. (1997) found that quality, cleanliness and value are the three most important considerations in fast food restaurants, while atmosphere and menu variety were relatively unimportant. When consumers considered the convenience and price of an eating-place,

the utilitarian value of eating out played an important role in restaurant evaluation and selection (Johns and Pine, 2002; Park, 2004).

However, all these researches were done outside Bangladesh. No study on fast food has yet been done in our country except beverage. In a study on the consumers' perception of two multinational beverage companies in Bangladesh, Hasan (2005) found that the overall attitudes of consumers' to Coca-Cola is better than the overall attitudes of consumers' to Pepsi-Cola according to the judgment of overall attitudes measurement. As this type of change in our food habit has already been practiced and few international fast food companies have already entered in Bangladesh. Therefore, it is the demand of the time to carry out research on fast food. With the rapid change in our traditional outlook it is expected that children of this generation will depend more on fast food. Thus it may welcome many opportunities and may cause create many problems as well. Therefore, this arena should be probed in detail, and that is why this survey was done.

Objectives

The article seeks to provide a better understanding of consumers' consumption behaviour with regard to fast food. It tries to determine

- i. the reasons for fast food consumption by the young generation.
- ii. the reasons for going to fast food outlets.
- iii. the youngsters' perception of fast food in terms of price, quality, and palate.
- iv. the youngsters' perception of fast food outlets in terms of ambience and hygiene.

Methods

Sample:

The sample of the study consisted of 200 respondents of Rajshahi Metropolitan City. Among them 135 were male and the rest 65 were female. These subjects were the students of different public and private colleges and universities. Their age ranged from 18 to 25 years. All of them attended all the fast food outlets in Rajshahi and they usually consume fast food at least once a week. None of them is in job but only few earn pocket money by working as private tutors.

Study area:

The study was done in Rajshahi Metropolitan city. There are some well known and some least known fast food outlets are running their business in Rajshahi. Among them four most popular fast food outlets of Rajshahi have been selected for this purpose. These are *Fresh and Wild* (near to Rajshahi University), *Chillis*, *Bishal*, *Meatloaf* (in Rajshahi main town). All these outlets are local food manufacturers who have entered into the market during 1995- 2003.

Instrument used:

A questionnaire was constructed to collect data for the study. Initially the questionnaire was prepared by the researchers. Then a panel of judges comprised of two Professors of Psychology and Marketing Departments of Rajshahi University, two students of Rajshahi University and Northern University, Rajshahi Branch thoroughly scrutinized the questionnaire. The questionnaire was divided into two sections; there were questions related to personal data of the subjects like age, gender, education, source of income, fast food preference, number of fast food consumption in a week, attendance to fast food outlets etc. in the first section. The second section of the questionnaire comprised structured questions related to following:

- i. Reasons of fast food consumption

- ii. Reasons for going to fast food outlets
- iii. Perception of price, palate, and quality of fast food
- iv. Perception of ambience and hygiene of fast food outlets.

Procedure:

Data were collected from the targeted customers while they were in fast food outlets. Convenient samples were selected from the four different outlets. Questionnaires were distributed with a request for filling it on the spot. Due care was taken to reduce possible biases in selecting the young customers for the purpose of data collection by way of filling the first section of the questionnaire related to their eating habits and demographic profile. In addition, a thorough analysis was done for each filled-up questionnaire to see the consistency of data provided by targeted customer specifically for customers who had filled the questionnaire when they were with their peers. Many incomplete questionnaires were found but such questionnaires were not considered worthy of analysis and were rejected. Moreover, it was also cautiously checked that the same individual did not fill up the question at different outlets.

Results

The results of the study are presented in the following tables.

Reasons for taking fast food

Reasons	Number of respondents (N)	Percentage (%)
Fast food is delicious	35	17.5 %
To dine out	12	6 %
To save time	0	0 %
To save money (as compared to Chinese food)	12	6 %
Being interested by advertisements (leaflet)	38	19 %
Being influenced by others (personal influence)	42	21 %
Fast food is a part of life	1	0.5 %
To have a change	28	14 %
Because of item image	18	9 %
To be adapted to a new culture	14	7 %

1. Reasons for going to fast food outlets

Reasons	Number of respondents (N)	Percentage (%)
To spend time with friends	42	21 %
To spend exclusive time with fiancé/fiancée	36	18 %
To celebrate special days and occasions (such as birthday, friendship day, valentine day etc.)	22	11 %
To enjoy time with the family	18	9 %

For better environment than traditional restaurants	26	13 %
As it is reasonably cheap than Chinese restaurants	10	5 %
Because of outlet image	18	9 %
Being interested by advertisements (leaflet)	12	6 %
For change	16	8 %

2. Perception about the price of fast food

Responses	Number of respondents (N)	Percentage (%)
Too high	57	28.5 %
High (who doesn't have much pocket money)	65	32.5 %
Moderate/affordable (who have come from a solvent family)	62	31 %
Low	14	7 %
Too Low	2	1 %

3. Perception about the quality (healthy food) of fast food

Responses	Number of respondents (N)	Percentage (%)
Excellent	3	1.5 %
Good	68	34 %
Not bad	80	40 %
Bad	48	24 %
Very bad	1	0.5 %

4. Perception about the palate of fast food

Responses	Number of respondents (N)	Percentage (%)
Excellent	1	0.5 %
Good	74	37 %
Not bad	105	52.5 %
Bad	20	10 %
Very bad	0	0 %

5. Perception about the ambience & hygiene of fast food outlets

Responses	Number of respondents (N)	Percentage (%)
Excellent	3	1.5 %
Good	85	42.5 %
Not bad	77	38.5 %
Bad	34	17 %
Very bad	1	0.5 %

Discussion

Results show that consumers identified several reasons for fast food consumption (Table 1). A large number of respondents (21%) mentioned that influence of others was the factor behind fast food consumption where as one (0.5%) subject identified fast food as a part of life. Advertisement effect (10%), taste of the food (17.5%), bring a change in daily life (14%), item image (09%), adaptability to a new culture (07%), dining out (06%) and saving money (06%) were the other reasons for fast food consumption as identified by the sample. Park (2004) mentioned that consumers lead increasingly busy lives, meaning that the time available to cook meals is being squeezed between work and leisure commitments. Cooking for many has ceased to be a leisure activity and instead is a chore: consequently, this has placed more emphasis on quick meal solutions. But in Bangladesh fast food consumption is still a sort of enjoyment rather than daily practice. Thus in Bangladesh daily cooking habit has not been replaced by fast food yet, as it happened in western countries.

Investigation was also done to explore the reasons for going to fast food outlets (Table 2). It was found that spending time with the friends was the reason for many to go to fast food outlets (21%) whereas having exclusive time with the fiancé/fiancée was the second highest reason (18%). The better environment of the restaurants than the traditional one was indicated as the third highest reason by the respondents (13%). 'Celebration of the special days like birthday, friendship day, Valentine's day etc in the fast food outlets' was the next reason (11%), 'enjoying time with the family was the reason with (09%) respondents 'outlet image' was the reason for 09% of this respondent, 'having a change by going the outlets' (08%), 'being interested by the advertisement' (07%), 'being reasonably cheaper than Chinese restaurants' (05%), were the other reasons indicated by the percentage of respondents shown against these categories.

According to Schlosser (2001) with increased mobility and the sprawling of urban areas, people spent more time commuting to work. This was coupled with an increasing presence of women in the work place resulting in less time allocated for food preparation at home. So, some three quarters of the family food budget was initially spent on fast food meals. As eating outlets are increasingly found mixed with other leisure venues, e.g. cinemas and shopping complexes, so eating out was becoming a leisure activity. Situating a fast food outlet near other leisure venues increased and this generated business from time-pressured adults, integrated eating out shopping and leisure venues became one-stop shopping/ leisure destinations.

In the study the researchers also tried to find out the consumers perception of price of the fast food (Table 3). Most of the respondents told that the price of the fast food was high (33%) whereas 31% of the respondents mentioned it as moderate. Other 29%, 07%, and 01% mentioned it as too high, cheap and very cheap respectively.

Several studies showed that when consumer considered the convenience and price of an eating -place, the utilitarian value of eating out plays an important role in restaurant evaluation and selection (Johns and pine, 2002; Park, 2004). But in Bangladesh as the consumers of fast food are mostly students with limited income or pocket money, the price of fast food seems much higher to them. In fact, in Bangladesh the price of fast food is comparatively high and beyond reach to most of the people with limited income.

About the quality of fast food it was found that (Table 4) a large majority of the sample (40%) mentioned it as moderate quality while 34% identified it as good and 24% found it bad. Very insignificant number of respondents mentioned it as excellent (2%) and very bad (1%). About the palate of the fast food (Table 5) 53% identified it as moderate, 37% mentioned it as good and only 10% perceived it as bad.

In western countries growing concerns over the fat and salt content of some fast food items have led to a growing criticism of eating fast food and have prompted the industry to offer a growing range of healthy fast foods. The sandwich sector has benefited from the demand for convenient healthy lunches, e.g. salad sandwiches, and chicken, have benefited from the

shift away from burgers (Jekanowski et al., 2001). Dietary patterns in childhood and adolescence have an influence on dietary preferences and eating patterns in adulthood and are important factors contributing to growth and development. This has led many to criticize the fast food industry for targeting its products at children (Hanson, 2002). But in Bangladesh, fast food industry has not flourished tremendously yet. Thus consumers are not very concerned about the quality of fast food from health viewpoint; instead they are more interested in palate of fast food. Though heavy consumption of fast food has already started to exert negative impact like obesity on the children in our country, the youngsters are not yet much concerned about it.

With regard to the consumers' perception of ambience & hygiene of fast food outlets it was found that a good number of respondents (43%) found it as good, and moderate (38%) while 17% of the sample mentioned it as bad and a very insignificant number of respondents found it excellent (02%) and worst (0.5%).

The results indicate that age, income, education and other factors, such as consumer attitude towards the price of fast food, health concerns and young consumers' preference influence the frequency of fast food consumption. The findings will help fast food establishments in Bangladesh to understand the critical factors of the consumers' fast food consumption behaviour and address them properly in their business.

Conclusion

The last twenty five years have seen a revolution in consumer tastes, all over the world helped by Chinese developers cooking programs, overseas travel, motivation, and growing cultural and ethnic diversity. This has broadened consumer tastes and helped make the takeaway and fast food market more sophisticated (Byrne et al. (1998). In Bangladesh, the fast food industry has grown rapidly since 1990s. The major changes in the lifestyle, education, income, and consumption patterns of Bangladeshi consumers in the last two decades encouraged consumers to eat out.

The aim of the present study was to determine the consumers' perception of fast food in Rajshahi Metropolitan City. For this purpose several aspects regarding fast food from consumers' viewpoint have been explored in the study.

This study is not without its limitations. For example, the survey was conducted among the fast food consumers in Rajshahi only in limited time span. It could only represent the customers' opinion of fast food in that specific period of time. There might be changes in customers' perceptions before and/or after the survey periods due to certain local events. But it may work as an eye-opener in the field of consumer's perception in the consumption of fast food.

A longitudinal study can help a better generalization in this regard. Furthermore, the same type of research is suggested to be conducted in different parts of the country to get better and concrete results in the arena of fast food consumption. Moreover, as convenience sampling has been employed to choose the respondents, future surveys with random sampling will help reduce the sampling bias.

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**SCARCITY OF ENVIRONMENTAL SERVICES, HEALTH, AND
EMOTIONAL DISTRESS: A CASE OF A SQUATTER SETTLEMENT
IN RAJSHAHI CITY, BANGLADESH**

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Abstract: Rajshahi is the fourth largest, and comparatively a low-income city in Bangladesh, where many of the inhabitants are suffering from various diseases due to poor household conditions, and scarcity of environmental services. Particularly the poor, who are living in the slums or squatters, are the major victims of these problems. Although many researches consider that slums or squatters are invariably equal in terms of environmental sufferings, this study basically argues that a slum or a squatter may not be equal in terms of economic opportunities, household's environmental conditions, and health sufferings, such as diseases and emotional distress. Using questionnaire survey, interview, and participatory observation methods, it tries to explore environmental variations within a squatter in terms of suffering from diseases and emotional distress, which are supposed to be associated with income categories (high, medium, and low), and households' conditions, such as water services and toilet facilities. The findings imply that consideration of every squatter as homogenous with regard to environmental opportunities and sufferings may trigger more social and environmental inequalities among the urban poor. This indicates that every single household's conditions, and health and emotional sufferings is unique, which needs to be considered in policy formulation regarding poverty and environmental health of the urban poor in developing countries.

1. Introduction

In the wide-area of urban environmental research, recently the scarcity of environmental services in the developing countries has got huge attention to the urban researchers (Wutich and Ragsdale, 2008; Myllyla and Kuvaja, 2005; Osumanu, 2007; Girard, 2003; Kleneiwski, 2006; Hardoy et al., 1992). Given the fact that the cities in the third world countries have been the centre of modernization and communication, and also engine of economic development, a rapid and continuous influx of rural-urban migration, result in an overwhelming increase of urban poor, and the failure in urban environmental management pose tremendous challenges to the urban authorities, and increase doubts on their ability to provide improved living conditions to all city dwellers, particularly to the poor (Osumanu, 2007; Bartone, 1991; Bryan, 1995). Realizing these facts, many argue that urbanization does not reduce poverty; rather it gives rise to enormous socio-environmental problems (Nazem 2001; Bartone, 1991; Bryan, 1995; Osumanu, 2007; Asthana, 1995; Hardoy *et al.*,

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1992; McGranahan and Satterthwaite, 2000; Pryer et al., 2002). In the same line of argument, Bockerhoff (2000; p. 6) notes that "cities generate more negative than positive effects for their residents". These negative effects, for example, include scarcity of water and precarious sanitation conditions in many cities in the developing world such as Bangladesh.

The existing literature on this issue particularly focus on two aspects. Firstly, many of them provide an account or statement of coverage of environmental services to the urban poor (Cotton and Franceys, 1994), and comparative analysis of access to formal environmental services between the poor and the rich dwellers (Kjellen, 2000; Milroy et al., 2001). Secondly, the studies also focus on the issues of supply system and institutional barriers to get access to environmental services (Kjellen, 2000; Davis et al., 2008; Titumir and Hossain, 2004; Ahsan and Ahmed, 1996).

In the case of Dar es Salaam, Tanzania, Kjellon (2000) notes that the water sources in the poor settlements are manifold but not free. The water supply system is a combined initiative of private, commercial and community organizations that compensate shortcomings of public water distribution system. Vending is the most prolific in rich areas where people have purchasing power. On the contrary, in the poorer areas the water supply system is insecure and the poor have to pay a large amount for water (Kjellon, 2000). Ahsan and Ahmed (1996) note that the issue of environmental services for urban poor is neglected in the development projects, programmes/policies in Dhaka, Bangladesh. Uddin and Jones (2000) claim that this negligence or low priority of unsanitary conditions in slum and squatter settlement is a big weakness of the development policies. In a similar vein, Nahiduzzam et al. (2006) argue that the policies regarding housing do not consider the local spatial context properly. In another study, Nahiduzzaman (2006) shows the nature of politicization of public organizations, and housing as a business of political elite. He asserts that the misuse of political power always satisfies the interest of businessmen politician, and keeps the urban poor out of services.

To evaluate performance of water supply system in providing potable water to urban poor in Dhaka, Akbar et al. (2007) indicate that the social, political and institutional factors are important. Uddin and Jones (2000) state that low priority of the unsanitary conditions in slums is a big limitation of the government. Titumir and Hossain (2004) identify several barriers of access to environmental services in addition to cost barriers. These include institutional barriers, such as 'decision made at the centre', anxiety approaching to the authority; and lackings in accessing information about services (Titumir and Hossain, 2004). However, these literatures focus on insufficient access to environmental services and the limitations at the policy level. Now let us see to what extent environmental service insufficiency affects human health.

The inadequate environmental service to the poor causes huge health impacts. Studies suggest that 80% of illness and 30% of deaths are caused due to unsafe and inadequate water in developing countries (Elhance, 1999; Wutich and Ragsdale, 2008). Savage (2006) claims that the slums and squatters are 'cesspools of diseases' because of unending vicious cycle of urban poverty and degraded environments. Thus, the degraded environments and health impacts are not only inherited but gradually produced by inadequate environmental service provisions in the city. From the perspective of a developing country, the literatures mainly focus on two things: firstly, the importance of environmental services for good health (Galiani et al., 2002; Weitz and Franceys, 2002; Kayaga and Franceys, 2007; Pryer et al., 2006); and secondly, the health impacts such as, mortality and morbidity (Checkley, et al., 2004, Wibowo and Tisdell, 1993; Barton and Wamai, 1992 Tumwine *et al.*, 2002; Moraes *et al.* 2003; D'Souza, 1997; Alam, 2007) and mental illness (Izutsu et al., 2006; Aikins and Ofori-Atta, 2007; Wutich and Ragsdale, 2008).

The improved and adequate water and sanitation have pivotal role to reduce child-death, diarrhoeal diseases, and parasitic infections (Checkley, et al., 2004). A study reports that

increased household water connection reduces child mortality by 24% in Argentina (Galiani et al., 2002). Moreover, the secure and accessible water and sanitation services reduce household expenditure, lessen time for water collection and stress from queuing (Weitz and Franceys, 2002; Kayaga and Franceys, 2007). In the context of Asian cities, Weitz and Franceys (2002) note that poor women are the best beneficiaries from the piped water connections. Pryer et al. (2006) explore that adult illness largely impacts on daily income of the poor in Dhaka. As a result, many poor in the slums and squatters gradually fall into acute poverty (Rashid, 2000). Kabir et al (2000) also indicate sickness as a barrier to livelihood security among the urban poor who are living in the slums of Dhaka. They argue that illnesses often have negative implications that make the poor more vulnerable.

The health impacts mainly include child-death from diarrhoeal diseases, adult illness and mental distress. D'Souza (1997) and Checkley *et al.* (2004) show the effects of inadequate housing, water and sanitation on children health in urban poor settlements. They, particularly, note that more than three million children die annually from respiratory infections in developing countries. In addition to this, diarrhoeal diseases individually remain one of the most important environmental health problems because of inadequate water supply and sanitation facilities in many developing countries (Wibowo and Tisdell, 1993; Barton and Wamai, 1992 Tumwine *et al.*, 2002; and Moraes *et al.* 2003; D'Souza, 1997). From the perspective of Pakistan, D'Souza asserts that 38% and 12% of all deaths are caused by diarrhoea and acute respiratory infections respectively.

Alam (2007) investigates the child diarrhoeal situation in slums in Dhaka, Bangladesh explaining household economic costs with reference to infrastructural and behavioral factors. He notes that the behavioral factors, such as open defecation, and lack of cleanliness are the reasons of diarrhoeal diseases. Caldwell et al. (2002) explore the reasons behind higher infant mortality rate in 'poor areas' of Dhaka. They note that the rate is higher in the poorest families that are least educated and come from rural areas, and believed in religious and indigenous treatment (*Kobiraj* and *Fakir*) methods, and also living in broken families (husband works far away). Hussain et al. (1999) also identify the causes of child mortality in slums of Dhaka city. They note that financial ability of the households, personal cleanliness, children's vaccination, and immunization of mothers are significantly associated with child mortality. Wood and Salway (2000) find that the locational disadvantage of slum and squatter settlements and seasonal dimensions are the vital cause of suffering of the poor.

Besides mortality and morbidity, lack of environmental services also causes mental illness (Izutsu et al., 2006). Aikins and Ofori-Atta (2007) show that homelessness deteriorates mental health and increases vulnerability of migrant squatters. Many other studies suggest that insecure access to food produces emotional distress, anxiety, and depression (Hadley and Patil, 2006; Whitaker et al., 2006; Hamelin et al., 2002; Coates et al., 2006). Likewise, Wutich and Ragsdale (2008) show water insecurity is linked with emotional distress. In the context of Bangladesh, very few researches examine interlink between infrastructural inadequacy of services and human health. Izutsu et al. (2006) show the conditions of mental health in slum and non-slum situations. They find that mental health, nutritional status, and quality of life differ between slums and non-slum areas, and also vary in terms of gender. They urge that while half of the population of Bangladesh will be living in urban areas by 2020 and a significant proportion will be living in slums, the issues of mental health, nutritional status and quality of life should get much attention focusing on the gender and area specific variations.

However, the aforementioned reviews report that the most immediate environmental problems are the ill health and emotional distress. Similarly, The World Health Organization (WHO), in 1992, reports that all countries in the world have serious environmental health problems, which affect hundreds of millions of people who suffer from respiratory and other diseases caused or exacerbated, both indoors and outdoors, by biological and

chemical agents in the air. It also highlights that health depends on whether people can obtain food, water and shelter, and over 1000 million people lack the income or land to meet such basic needs (WHO, 1992). Notably, the diseases associated with poor water and sanitation system still have considerable public health significance (Hutton and Haller, 2004). In 2003, it was estimated that 4% of the global burden of disease and 1.6 million deaths per year were attributable to unsafe water supply and sanitation, including lack of hygiene (WHO, 2003)

Realizing this fact, Hardoy et al. (1992; p. 20) claims that "a new environmental agenda is needed in the Third World cities, one which centers on enhancing the capacity of city authorities, professional groups, non-government organizations (NGOs) and community organizations to identify and address their environmental problems". In a similar vein, Serageldin (1994) points out two great challenges in supplying environmental services (water and sanitation) in the developing countries. The first challenge is to complete the 'old agenda' of providing household services, while a billion people still lack access to an adequate supply of water, and 1.7 billion do not have adequate sanitation facilities. The second challenge is the 'new agenda' of environmentally sustainable development—the task is considerably difficult for the developing countries (Serageldin, 1994).

Drawing upon these contextual and theoretical debates, this study argues that the existing literature pays a less attention to the local agenda of the environmental problems, and neglect actual problems on the ground. For example, the local agenda includes variations of environmental health status and housing conditions among and within the low-income settlements. To experiment this variation within the low income settlement in the local context, this study conducts a case study in a squatter settlement, and assumes that the variations of disease profiles depend on the households' environmental conditions, which are associated with income categories. Basically, it assesses the hypothesis 'wealthier is healthier' to understand both well-being and environmental health of the informal poor at micro level. In a similar approach of Rahman (2006), this study accepts a triangular relationship between income, household conditions and disease, and adds a new variable of emotional distress. It hopes to show that emotional distress also varies along with quality of environmental conditions and income categories. Therefore, in general, the study aims to exemplify to what extent income categories affect disease profiles and household conditions. In addition, it argues that the residents of an informal settlement are not economically and environmentally equal.

However, this study assesses the following hypotheses: First, there exists a positive association between income categories and occurrence of diseases; second, there exists a positive relationship between income levels and emotional distress; and third, there exists, in general, a positive relationship between income categories and household environmental services.

2. Materials and methods

The study is mainly based on primary data, collected through: (i) participant observation, (ii) informal discussion with the inhabitants, and (iii) structured questionnaire survey. The questionnaire used in this study was constructed with the help of questionnaires used in similar study by Rahman, 2006; and McGranahan, 1993. It includes the following aspects: disease profiles; uses of latrines, and mosquito nets; quality of available water; storage of water; disposal of faecal matter; spaces per person in sleeping room; ventilation conditions in house; place of cooking; smoking inside the sleeping room etc.

The survey was conducted in 2012. All of the households in Vadra squatter were included in the field survey. The squatter is developed near the Padma Residential Area, which is comparatively wealthier residential area in the city. The squatter is basically located besides the road that links the newly developed Bus Terminal with the downtown and temporary bus stand in Vadra.

The head of the households were chosen based on their availability in houses, and particularly those who were interested to participate in the study were selected. The respondents were informed of the ethical issues of the research at the beginning of the survey. Table 1 shows the descriptive statistics of socio-economic characteristics of the respondents. For getting accurate and reliable data, the researchers had to visit more than once. It is also notable that the wives of the head of the households were informally interviewed to cross-check the information given by their husbands during questionnaire survey. The same treatment was also followed while the respondent was wife of a household.

Table 1: Descriptive statistics of socio-economic characteristics of the respondents

Categories	Number of respondents	Percentage
Sex		
Male	59	60.8
Female	38	39.2
Religion (Muslim)	97	100
Education (Attended School)	31	31.90
Family Type		
Nuclear	57	58.8
Extended	40	41.2
Average size of the Households		4.2
Average monthly income (Taka)		5438
Average age of the respondents (Years)		39.88

Table 1 depicts that the majority of the respondents were male, even though the number of female was not very low. The average age of the respondents is 39.88 years. The religious varieties were not found in the squatter since all of the respondents were Muslims. The percentage of illiteracy is quite high in the study area while 31.90% of the respondents got schooling in their lives. A domination of nuclear type of family structure was found, with average family size of 4.2 in a household. The average monthly household income was 5438 Taka only. Table 2 categorizes the households based on income levels: low (5000 and Less); medium (5001-7000); and high (7001 and More). It also shows that the share of first two categories of the respondents is similar, but the third category is quite low, which is only five percent. Basically, these categories were used to analyze variations of disease profiles, and household environmental conditions among the respondents.

Table-2: Income categories of the respondents

Income Groups	Income (Taka per Month)	No of Sampled Household	Percentages
Low	5000 and Less	47	48.5
Medium	5001-7000	45	46.4
High	7001 and More	5	5.2
Total		97	100

Note: 1US \approx 83 BD Taka.

To create Guttman scale for the progression of water and sanitation-related emotional distress, we took steps for asking 'yes' or 'no' questions related to water and sanitation scarcity. A Guttman scale is a kind of composite measure made up of indicators that point to a progressive, unidimensional concept (Rahman, 2006; Wutich and Ragsdale, 2008; Guttman, 1950). As can be seen in Figure 1, the emotions are categorized into four types: bother, anger, worry, and fear. It was further scored on the basis of absence and presence of the 'yes' answer. It is clearly shown in the figure that when the response set consisted of

four 'yes', then the score is 4, and it gradually decreases with the absence of the 'yes' response. These scores were further categorized to show the level of emotional distresses, which are depicted in the right two columns of the figure. However, it is also noteworthy that SPSS (Statistical Package for the Social Sciences) was used to analyze data statistically by using descriptive statistics and conduct Chi-square test.

Figure 1: Guttman Scale for the progression of water and sanitation-related emotional distress

Emotions	Possible response sets					Score	Emotional distress
	No	No	No	Yes	Yes		
Bother	No	No	No	No	Yes	0	None
Anger	No	No	No	Yes	Yes	1	Some
Worry	No	No	Yes	Yes	Yes	2	Moderate
Fear	No	Yes	Yes	Yes	Yes	3	High
Total Score	0	1	2	3	4	4	Very High

3. Disease profile in Vadra Squatter

The disease profile has been calculated based on the diseases suffered by the respondents during the last five months. The most frequent first ten diseases were worm, pneumonia, diarrhoea/dysentery, malaria, cough, respiratory diseases, gastric, jaundice, heart disease, and hypertension. The problems of worm (52.57%) emerged as the most common disease in the squatter. This is followed by pneumonia (46.39%), diarrhoea/dysentery (44.33%), malaria (34%), cough (25.77%), respiratory diseases (21.65%), gastric (15.46%), jaundice (14.43%), heart disease (7.22%), and hypertension (7.22%). Despite these average figures of sufferers, the nature of suffering from diseases differs according to the income categories (Table 3). It can be seen in Table 3 that the high-income households are mostly suffering from hypertension and heart disease. On the contrary, the low-income and medium income households are suffering from Malaria, Pneumonia, Worm, diarrhoea/dysentery and Cough. These diseases are very common in the squatter due to precarious conditions of water and sanitation services (see Table 4 for details). In addition, sufferings from diseases vary according to different level of access to water and sanitation services, which are supposed to be directly related to income categories.

Worm, pneumonia, diarrhoea/dysentery, malaria, and cough are found as the top five diseases in the study area. A relationship was drawn between these diseases and water, toilet, and housing conditions, which are mainly assumed to be responsible for these diseases.²

Table-3: Disease Profiles of the Sampled Households

Low Income	%	Medium Income	%	High Income	%	Total	%
Malaria	61.76	Worm	58.82	Heart Disease	14.28	Worm	52.57
Cough	60	Pneumonia	51.16	Hypertension	14.28	Pneumonia	46.39
Gastric	60	Diarrhoea/Dysentery	46.51	Pneumonia	9.30	Diarrhoea/Dysentery	44.33
Jaundice	57.14	Hypertension	42.85	Gastric	6	Malaria	35
Respiratory Diseases	57.14	Jaundice	42.85	Worm	5.88	Cough	25.77
Heart Disease	57.14	Malaria	38.23	Respiratory Diseases	4.76	Respiratory Diseases	21.65
Diarrhoea/	51.16	Respirator	38.09	Cough	4	Gastric	15.46

² Please see Rahman (2006) for detail description about environmental conditions and health.

Dysentery		y Diseases					
Pneumonia	44.18	Cough	36	Diarhoea/ Dysentery	2.3	Jaundice	14.43
Hypertension	42.85	Gastric	34	Malaria	0	Heart Disease	7.22
Worm	35.29	Heart Disease	28.57	Jaundice	0	Hypertension	7.22

Table 4: Water and sanitation conditions responsible for various diseases

Water Services	Toilet Services	Housing Conditions
Inadequate and poor quality of water services	Unsatisfactory toilet facilities	Unsatisfactory living space
Poor water storage facilities	No excreta collection system	Poor drainage and garbage disposal
Unsatisfactory drinking water	Defecation in open places	No kitchen
Unsatisfactory bathing water	No habit of hand wash after toilet	Smoking inside living room
		Smokes come from neighborhood
		Presence of mosquito in house
		No use of mosquito nets
		No ventilation system
		Dissatisfaction about housing conditions

Relationship between households' environmental conditions and the occurrence of Worm

Worm is a major disease issue observed by the Vadra Squatters. The respondents commonly refer to the problem of worms, particularly to the younger, when they were asked 'what are the common diseases your household members suffer from?'. On an average, it was found that the occurrence of worm problems is 52.57%. Table 5 also shows that the occurrence of worm caused problem varies within the household income categories i.e. low (35.29%), medium (58.82%), and high (5.88%). It indicates that the low-income and medium-income households are more vulnerable to the problem than the high-income households. These differences may be mainly due to the fact of inadequate and unequal access to water and sanitation facilities, and limited access to treatment facilities by the lower income households. The higher percentage of occurrence of worm problem in the medium income households indicate that these group may be more concerned about their health problem than the lower income group. In many occasion we felt that the lower income groups are reluctant to participate in the study and express their problems. This may be another cause of lower percentage of worm occurrence in the lower income household.

Relationship between households' environmental conditions and the occurrence of pneumonia

Over all, the analysis which follows the Table 6 depicts a relationship between environmental risk factors and occurrence of pneumonia. The risk factors, in this case, include exposure to polluted environment, unsatisfactory access to foods, unhygienic housing and water facilities. In general, the younger group that is less than five years old is mostly vulnerable to pneumonia. It was observed that the younger group mostly passes their time playing and roaming around unhygienic conditions. In summer, a majority of

them take bath many times in a single day in the nearby unhygienic pond. On the contrary, they are comparatively more exposed to very cool wind, and lacking in hygienic bathing water in the winter. However, Table 6 shows that about 44.18% low, 51.16% medium, and 9.3% high income households have reported occurrence of pneumonia. It indicates that the members of comparatively lower income (low and medium) households are suffering from pneumonia more than the richer in the squatter. Therefore, we may assume that the higher income households have better access to water and housing services, albeit the overall situations of environmental conditions are still very poor.

Table 5: Relationship between sanitation, water supply conditions and the occurrence of Worm (all figures are in percentage)

Income Categories	State of using toilets (Not Available)	Defecations in open places (Yes)	Habits of hand wash after toilets (No)	Disposal of faecal matter into garbage (Yes)	Unsatisfactory drinking water supply (Have piped water)	Unsatisfactory water storage (Yes)	Total average of six household environmental conditions	Occurrence of Worm (Yes)
Low	49.31	50.68	43.18	48.89	39.47	57.50	48.33	35.29
Medium	47.95	46.57	54.54	47.78	47.36	37.50	46.67	58.82
High	2.74	2.74	2.27	3.33	7.89	5.00	5.00	5.88
% of Total	75.25	75.25	45.36	92.78	39.17	41.24	61.85	52.57

Table 6: Relationship between sanitation, water supply conditions and the occurrence of Pneumonia (all figures are in percentage)

Income Categories	Exposed to polluted environment	Unsatisfactory food habits/nutrition	Smoking inside living room	Unsatisfactory housing conditions	Unsatisfactory bathing water (pond)	Total average of five household environmental conditions	Occurrence of pneumonia
Low	50	51.08	52.24	49.15	46.75	50	44.18
Medium	45.31	48.91	44.78	47.46	46.75	45.83	51.16
High	4.69	0.00	2.98	3.39	6.49	4.17	9.3
Total	65.98	94.84	69.07	60.82	79.38	74.23	46.39

Relationship between households' environmental conditions and the occurrence of diarrhoea/dysentery

Diarrhoea/dysentery, a very infectious disease that occurs due to virus and bacteria, is one of the major health problems to the urban poor. Table 7 shows the occurrence of diarrhoea/dysentery within different income groups i.e. low (51.16%), medium (46.51%), and high (2.3%). Although the total average percentage of occurrence is 44.33, the lower and medium level income groups are mostly vulnerable to this disease. The table also clearly depicts that the households with worse environmental conditions are more suffered from diarrhoea/dysentery. For example, the high income households have comparatively better water and toilet facilities and their suffering rate is comparatively low. It was observed that the higher occurrence of diarrhoea/dysentery in the squatter may be due to the following facts: absence of satisfactory toilet facilities and water supply system, defecation in open places, poor habits of hand wash after toilet, presence of faecal matters inside houses and even inside rooms, and unhealthy water storage system.

Relationship between households' environmental conditions and the occurrence of Malaria

Presence of mosquitoes and their biting are common experiences of the Vandra squatters. It was reported that mosquitoes are present in every season and every day, especially they become dangerous at night. Likewise other diseases, comparatively wealthier households are suffering less from malaria. Although, on an average, 35% households report problems of malaria, nobody from the high income categories reports occurrence of malaria (Table 8). It was observed that household wastes (including water) and garbage are disposed in the open places, which supposed to be the breeding grounds of the mosquitoes in all the seasons. A few of the living rooms have windows and proper ventilation system. This helps mosquitoes stay always inside the rooms. In addition, a majority (59.79%) of the residents do not use mosquito net during sleeping (Table 8). Therefore, it may be concluded that the worse environmental conditions and access to proper measures of protection from mosquitoes may be directly associated with higher occurrence of malaria.

Table 7: Relationship between sanitation, water supply conditions and the occurrence of diarrhoea/dysentery (all figures are in percentage)

Income Categories	State of using toilets (Not Available)	Defecations in open places (75 Yes)	Habits of handwash after toilets (44 No)	Disposal of faecal matter into garbage (no excreta collection)	Unsatisfactory quality of water supply (32)	Total average of five household environmental conditions	Occurrence of diarrhoea/dysentery
Low	49.31	50.68	43.18	48.89	46.87	48.39	51.16
Medium	47.95	46.57	54.54	47.78	40.62	48.39	46.51
High	2.74	2.74	2.27	3.33	12.50	3.23	2.3
Total	75.25	75.25	45.36	92.78	32.99	63.92	44.33

Table 8: Relationship between sanitation facilities, water conditions and the occurrence of Malaria (all figures are in percentage)

Income Categories	Open/No Drainage (66)	Poor garbage disposal	Presence of mosquito inside the house (100)	No use of preventive measures from mosquitoes (58 No)	No windows and/or ventilation system (27)	Total average of five household environmental conditions	Occurrence of Malaria
Low	46.97	45.78	47	44.83	44.44	46.27	61.76
Medium	46.97	49.39	45	53.45	48.15	47.76	38.23
High	6.06	4.82	5	1.72	7.41	5.97	0.00
Total	68.04	85.57	100	59.79	27.83	69.07	35

Table 9: Relationship between sanitation facilities, water conditions and the occurrence of Cough (all figures are in percentage)

Income Group	Space/person in living rooms	No kitchen	Neighborhood smoke coming into living room	No windows or outlet for ventilating smoke	Smoking inside the house	Total average of five household environmental conditions	Occurrence of cough
Low	54.54	48.96	49.47	44.44	52.24	49.18	59
Medium	45.45	46.87	46.32	48.15	44.78	45.90	37
High	0.00	4.17	2.10	7.41	2.98	4.92	4
Total	22.68	98.87	97.94	27.83	69.09	62.89	23

Table 10: Contingency table from the household surveyed data (all figures are in numbers)

Income Groups	Average total of water supply and toilet facilities, and sewerage facilities ^A		Occurrence of worm ^B		Average total of bathing water supply & housing conditions ^C		Occurrence of pneumonia ^D		Average total of water supply and toilet facilities ^E		Occurrence of diarrhoea/dysentery ^F	
	Poor	Not poor	Suffering	Not suffering	Poor	Not poor	Suffering	Not suffering	Poor	Not Poor	Suffering	Not suffering
Low	32	15	18	29	10	5	19	28	30	17	22	25
Medium	30	15	30	15	45	31	22	23	30	15	20	25
High	2	3	3	2	4	2	4	1	2	3	1	4
Total	64	33	51	46	59	38	45	52	62	35	43	54

Calculated $\chi^2 =$ ^A1.606; ^B7.537; ^C60.605; ^D6.505; ^E1.388; ^F1.317.

Relationship between households' environmental conditions and the occurrence of Cough

The findings of this survey suggest that indoor air pollution and unhygienic housing instigate the problem of cough. The reasons of indoor air pollution are cooking inside living room or in veranda, smokes inside living room, neighborhood smokes coming inside living room, and no proper ventilation system. There are few households that have living spaces with windows in their rooms. In addition to that many of the respondents use smoky fuels like dry leaves, dung cake, and wood for cooking. Another problem of respiratory disease is unsatisfactory sleeping spaces per person. Although the data in the Table 9 shows a small portion (22.68%) of the respondents reports the problem of inadequate living spaces (4-7 persons living in one room), it was observed that most of the living rooms are very small in size and very uncomfortable to live. The problem of cough is more severe in the lower income households (59%) than the other occurring diseases. On the contrary, only 45% of the high income category report occurrence of cough.

Associations between environmental services, housing conditions, and diseases

The associations between household environmental conditions and occurrence of diseases are analyzed based on income categories of the households. This study informs us the real facts of the environmental inadequacies in the study area that is experienced/observed by the respondents. There are other studies that also recognized environmental conditions as

the factors of human health (Rahman, 2006). Similarly, this study also tries to analyze the associations between occurrence of diseases and household income status, which actually relate to variability of access to services. However, the contingency tables are created to show the relationships between income levels, and existing housing conditions and occurrence of diseases using Chi-square technique (Table 10 and Table 11). The specific variables for measuring housing conditions are selected based on a particular disease, which may be a result of the lackings in those conditions.

The critical Chi-square is 5.991 at 0.05 level of significance with 2 degree of freedom, which is considerably more than the calculated Chi-square 1.606 in case of income and housing conditions; and less than the value 7.537 in case of income and worm (Table 10). Therefore, the null hypothesis 'there exist no significant association between income and housing conditions' is accepted, and the null hypothesis in case of association between income and worm disease is rejected with 95% confidence level. With normal eyes, the data in section three show us that there exists association between income categories and housing conditions and worm diseases as well. But, statistically, it is found that the first case shows no association, and the second case shows presence of associations. Thus, it may be concluded that though worm diseases do vary across the income categories, the housing conditions do not vary in the same way. This contradiction may be a result of defining the reasons /factors of worm diseases, and wrong response from the respondents.

Table 11: Contingency table from the household surveyed data (all figures are in numbers)

Income Categories	Average total of housing conditions and drainage and disposal facilities ^G		Occurrence of malaria ^H		Average total of housing conditions and indoor pollution ^I		Occurrence of cough ^J	
	Poor	Not poor	Suffering	Not suffering	Poor	Not poor	Suffering	Not suffering
Low	31	16	21	26	30	16	13	34
Medium	32	13	13	32	28	16	9	36
High	4	1	0	5	3	4	1	4
Total	67	30	34	63	61	36	23	74

Calculated $\chi^2 = {}^G 0.581; {}^H 5.36; {}^I 0.044; {}^J 0.786$.

The critical Chi-square is 5.991 at 0.05 level of significance with 2 degree of freedom, which is quite less than the calculated Chi-square 60.605 in case of income and housing conditions, and 6.505 in case of income and pneumonia. Therefore, the null hypothesis that there exists no significant correlation between income and housing conditions and also between income and pneumonia is rejected with 95% confidence level. It may be concluded that both of the cases do vary significantly amongst different income categories in the study area.

The critical Chi-square is 5.991 at 0.05 level of significance with 2 degree of freedom, which is quite more than the calculated Chi-square 1.388 in case of income and housing conditions, and 1.317 in case of income and diarrhoea/dysentery. Therefore, the null hypothesis that there exists no significant correlation between income and housing conditions and also between income and pneumonia is accepted with 95% confidence level. It may be concluded that both of the cases do not vary significantly amongst different income categories in the study area.

The critical Chi-square is 5.991 at 0.05 level of significance with 2 degree of freedom, which is considerably more than the calculated Chi-square 0.581 in case of income and housing conditions; and less than the value 6.36 in case of income and Malaria (Table 10).

Therefore, the null hypothesis that there exists no significant association between income and housing conditions is accepted, and the null hypothesis in case of association between income and Malaria is rejected with 95% confidence level (Table 11). Thus, it may be concluded that though the occurrence of Malaria does vary across the income categories, the housing conditions do not vary in the same way. This contradiction may be a result of defining the reasons /factors of Malaria disease, and misunderstanding by the respondents. The critical Chi-square is 5.991 at 0.05 level of significance with 2 degree of freedom, which is quite more than the calculated Chi-square 0.044 in case of income and housing conditions, and 0.786 in case of income and the disease, cough. Therefore, the null hypothesis that there exists no significant correlation between income and housing conditions and also between income and cough is accepted with 95% confidence level. It may be concluded that the factors of cough disease and cough itself do not vary significantly amongst different income categories in the study area.

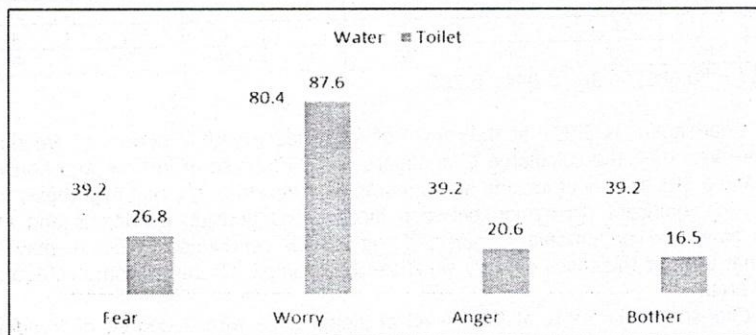
Environmental services and emotional distresses

Water and toilet-related emotional distresses

From the selected variables of households' environmental conditions, as discussed earlier in methodology section, water and toilet-related negative experiences or sufferings are considered to determine emotional distress. We consider four emotions related to water insecurity: (i) fear, (ii) worry, (iii) anger, and (iv) bother (See Wutich, 2008 for details). During the questionnaire survey, we asked the respondents whether, in the last week, water and toilet insecurities had caused them these emotions.

As shown in the Figure 2, 39.2% of respondents report that they have experienced fear at least once for water insecurity. On the contrary, 26.8% report fear for toilet insecurity. Notably, the emotion of fear also varies across the income categories. Figure 3 shows that the medium income households experience fear more than the other two groups. Basically, the fear of water and toilet is due to their feelings that at any moment they can lose the sources of water and toilet facilities as well.

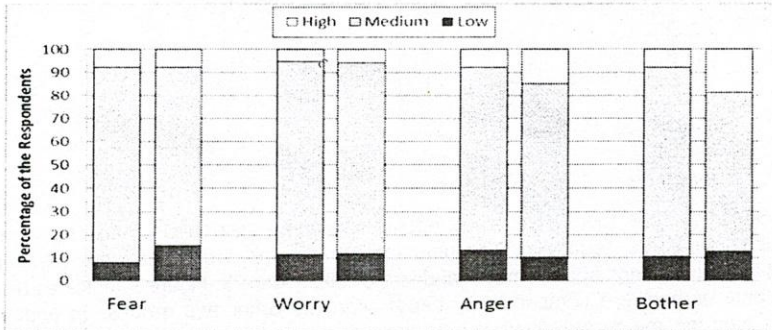
Figure 2: Percentage of respondents experiencing negative water and toilet related emotional distresses



Worry over water and toilet insecurity was the major emotional distress in Vadra squatters (Figure-2). This distress for scarcity of water and toilet was experienced by 80.4% and 87.6% of respondents respectively. Figure 3 shows that medium income households are more worried than others. The respondents feel worried about the hygiene of water and toilets. Many of them feel the drinking water they drink is not germ-free, and the toilets they use are not environmentally friendly. Despite the facts, they continue drinking such

unhealthy water and use unhygienic toilets for no better available alternatives to their reach.

Figure 3: Variations of emotional distress among the income categories
(First column represents water supply, and second column represents toilet facilities)



As can be seen in Figure 2, 39.2% and 20.6% of respondents show anger because of water and toilet insecurity respectively. Like fear and worry, anger is mostly felt by medium income groups. As reported by the respondents, the anger arises because of common sources of water and community toilets. They feel that all of the members in the community are not aware enough to maintain their water sources and toilets. Basically, the richer households state that most of them are less aware because of staying in the community temporarily. It indicates that the emotion anger may be a result of weak community solidarity in the Vadra squatters.

It was also found that 39.2% and 16.5% of the respondents experience bother over water and toilet insecurity respectively (Figure 2). Many respondents feel bother because of difficulties of collecting and storing water. They state that one member of their households need to go for collecting drinking water. Bothering also mounts when the sources of water are far from the household and when they have to queue up for a long time. They experience also the same feeling in case of toilet facilities. They feel bothered over toilet, particularly in the morning, when many people queue up for using one toilet, or they are bound to defecate in open places in broad daylight.

However, it is notable from the findings that medium income earners are mostly emotionally distressed for scarcity of water and toilet facilities. The reason may be high-income earners are already enjoying comparatively better facilities. On the contrary, the low-income groups do not think much about the facilities while they are quite habituated and adapted with scarcity.

Figure 4 shows Guttman scale of water supply and toilet facilities related to emotional distress. According to the scale, less than 15% respondents feel no distress for scarcity of water and toilet. On the contrary, a significant majority of the respondents experience considerable level of emotional distress in both the cases. But, it is remarkable that the respondents are more distressed for scarcity of water than the toilet facilities. It is also clear that more than 40% of the respondents feel emotional distress highly and very highly for water scarcity. On the contrary, more than half of the respondents feel distress to some extent and none for the scarcity of toilets.

Figure 4: Guttman scale of water and toilet related emotional distresses

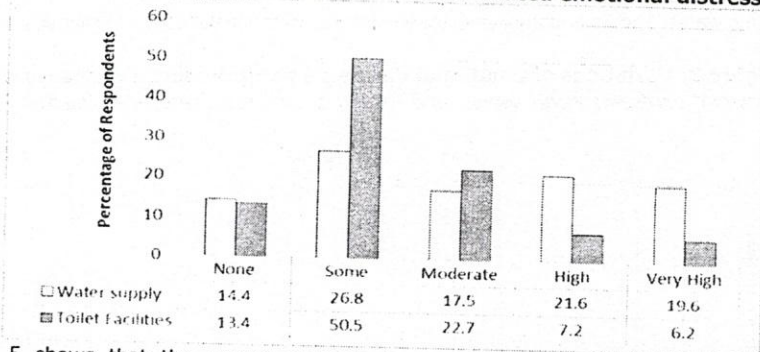
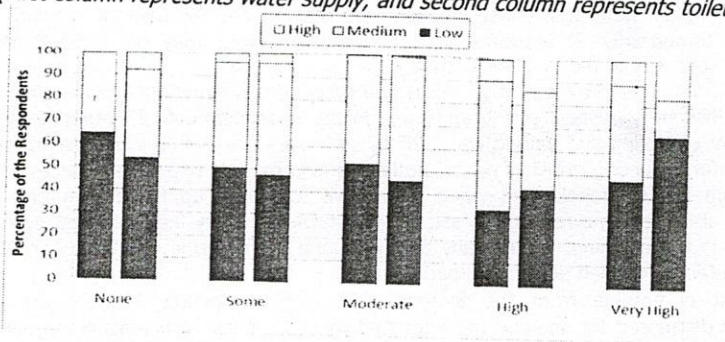


Figure 5 shows that the poorer respondents are more distressed than the wealthier respondents in Vadra squatters. The high income earners are found very reluctant to respond to their feelings about emotional distress. Like Figure 3, Figure 5 indicates that the high income earners are comparatively better than the other two groups. In addition to that, the high income earners may also be very clever to deal with their problems. During fieldwork, it was observed that the wealthier were mostly unwilling to participate in the research, and they tried to manipulate the information realizing the facts that some issues may come up for their answers.

Figure 5: Guttman Scale of emotional distress based on income categories
(First column represents water supply, and second column represents toilet facilities)



Socio-economic impacts of emotional distress

Wutich and Ragsdale (2008) find that water insecurity has also link with mental distress. Previously Ennis-McMillan (2006; 2001) also explored that scarcity of water caused emotional distress, like frustration, anguish, bother, worry, and anger in a Mexican community, which resulted from social inequalities. Moreover, there are researches which suggest that improvement of water supply to household has direct impact to household economy (Weitz and Franceys, 2002; Kayaga and Franceys, 2007). A study in Manila by Aiga and Umenai (2002) suggests that improved water supply helps the community to save money and time that has socio-economic impacts. This study accepts the findings of these researches and finds that emotional distress for scarcity of water and sanitation has considerable socio-economic impacts. It was found that women and children of the Vadra squatter basically spend handful time for collecting water or queuing up for toilet use. On an average, they spend more than one hour in a day for water collection. While the economic value of two-hour works as housemaid is 300 Taka per month, which really matters to a household for their sustainable livelihood.

Conclusion

Environmental services like water supply, toilet facilities, and improved household conditions are the basic indispensable needs for human survival and sustainability. The urban poor squatters are the major victims of these environmental problems. The scarcity of environmental services in their houses may increase occurrence of diseases and worsen emotional distress which has direct socioeconomic impacts. This study not only explores the association between scarcity of services and health outcomes but also compares the poor across income categories. It was assumed that the poor squatters do not get equal environmental benefits and sufferings as well.

The descriptive statistics shows that the squatters are suffering mostly from worm, pneumonia, diarrhoea/dysentery, malaria, and cough. In addition to that the percentages of sufferers vary across the income categories i.e. the low income earners are more vulnerable than the wealthier. The Chi-square tests confirm partly the first hypothesis showing that the diseases, worm, pneumonia and malaria, were significantly associated with income categories, though the associations with other two diseases, diarrhoea/dysentery and cough show different results. However, the descriptive findings also confirm the second hypothesis showing that the scarcity of environmental services triggers emotional distress, like fear, worry, anger, and bother. Moreover, these emotional distresses vary across the income levels of the squatters. These results confirm that the environmental sufferings of the poor depend on the earning opportunities that might help them to improve their household environmental conditions. The final statement confirms the third hypothesis of the study.

However, this study provides us some ideas of the environmental problems in urban poor settlements. Basically, it has revealed that the poor squatters are not economically and environmentally equal. It also briefly highlights the socioeconomic impacts of health hazard and emotional distress. Thus the policy makers and urban planners need to understand that similar remedial strategies for poverty alleviation and improvement of quality of life for the squatters will not be suitable for all the squatters. It simply suggests consideration of socio-environmental inequalities among the urban poor in intra-community perspective in the third world cities, like Rajshahi in Bangladesh. Otherwise, this kind of unequal economic opportunities and environmental sufferings may trigger more socio-environmental disparities among the urban poor.

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CONTRIBUTIONS OF AGRICULTURE SECTOR TO BANGLADESH ECONOMY

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Abstract: This study was conducted to investigate the importance of agriculture sector in the economy of Bangladesh, to analyze the growth of agriculture and to identify the exiting problems in this sector using secondary data. Findings show that all the sub-sectors under agriculture sector made remarkable contribution to several economic indicators like food security, Gross Domestic Product (GDP), income, employment, export earning etc. The contribution of crop, livestock, fishery and forestry to GDP was 11.42%, 2.65%, 4.49% and 1.73% respectively in 2009-10 fiscal year. Production of food grains, fishery, milk, meat and egg have increased by 27%, 63%, 33%, 61% and 29% respectively from 2000-01 to 2009-10 financial year. Bangladesh earned 1652.36 million US Dollars by exporting agricultural commodities in 2009-10 financial year which was 15% higher than the export earning of 2008-09 fiscal year. The whole agriculture sector generates about 60% of total national employment. In the present study several important problems in agriculture sector were identified such as high price of production input, comparatively lower price of agricultural products, unorganized marketing system, complexity in getting agricultural credit and lack of appropriate training for the farmers. Findings suggest that the government should take necessary steps to solve the problems that will make agriculture able to play its dominant role in the economic development of the country.

Introduction

Bangladesh is primarily an agriculture dependent country. Agriculture sector has a very important role on employment generation, poverty alleviation, human resources development and food security. About 70% of its population depends on it. The contribution of agriculture sector to the Gross Domestic Product (GDP) in 2009-10 was 20.29%.¹ The dependency of the people on this sector however is still substantial. Bangladesh with a total population of 142.19 million is the eighth most populous country in the world.² In fact rice and wheat are the major sources of calorie and meet about 80%–

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¹ Finance Division, *Bangladesh Economic Review 2010* (Dhaka: Ministry of Finance, Government of the People's Republic of Bangladesh, 2010), pp. 92–93.

² Bangladesh Bureau of Statistics(BBS), *Population and Housing Census 2011* (Dhaka: Reproduction, Documentation and Publishing Wing, BBS, Planning Division, Ministry of Planning, Government of the People's Republic of Bangladesh, 2011), pp.3–4.

90% of food requirement of the country in average crop year.³ During the last ten years, food production has increased from 26.90 million tons to 34.11 million tons.⁴ The production of fisheries and livestock has also increased considerably. The government policy is predominantly based upon modern technologies in agriculture like use of high yielding variety (HYV) seeds, quality fertilizer, pesticides etc. Population pressure on land is very high in Bangladesh. The rate of population growth of the country is now in a stable or decreasing trend. The availability of human food in general and protein rich food (meat, fish, egg, milk etc.) in particular is always decreasing. In this situation agricultural production (crop, meat, fish, egg etc.) has to be increased.

Agriculture includes farming crops, animals, fisheries and forestry. Agriculture remains a fundamental sector of the economy absorbing about 61% of the workforce.⁵ This study is an attempt to analyze the role of broad agriculture sector on the economy of Bangladesh. The importance and contribution of crop production, animal farming, fisheries and forestry have been critically discussed in various section of this paper. Keeping in mind the above views, the present research was conducted with the following objectives.

- To show the economic importance of agriculture sector.
- To analyze the growth trend of agriculture sector in Bangladesh.
- To identify the major problems in agriculture and to make some suggestions for their solutions.

Methodology

The data of the present study were collected from various secondary sources through content analysis method from concerned government documents, related literatures, books, journals, news papers, articles, theses, and web sites. Information was also collected from related government offices like Department of Agriculture Extension, Department of Livestock Services, Department of Fisheries, Department of Forestry and Department of Food. Descriptive statistics such as mean, percentage etc. were used to describe the variables/indicators of the study. After analysis of data results are presented in various tables and graphs.

Importance of Crops

Production of Food Grains

About 73% of total cultivable land is devoted to rice production and average cropping intensity is 180%.⁶ Production of food grains in last ten years is shown in Table 1. The production of rice was 250.0 lakh metric tons in 2000-01 financial year. After 10 years the production increased to 322.57 lakh metric tons. The rate of increase is 2.90%.⁷ On the other hand, the total food grain production in 2000-01 financial year was 269.06 lakh metric tons which increased to 341.13 lakh metric tons in 2009-10 financial year.⁸ The annual growth in total food grain production is 2.68%. Among various types of rice both amount and growth of the production of *Boro* rice was the highest followed by *Aman* and *Aus*. However, production of *Aus* slightly decreased. At the same time production of wheat was in decreasing trend (growth -4.2%) The government took various steps to provide agro-inputs assistance, which include reduction of price of non-urea fertilizers (TSP, MOP, DAP etc.) and cash incentive for diesel. Introduction of non-urea

³ M. A. Kabir, "Improvement of Livelihood Patterns through Cereal Crop Production in some Selected Char Areas of Jamalpur District", (Mymensingh: Unpublished M.S. Thesis, Department of Agricultural Economics, Bangladesh Agricultural University, 2009), pp.1-4.

⁴ *Bangladesh Economic Review 2010*, Loc. cit. p.90.

⁵ *Yearbook of Agricultural Statistics of Bangladesh 2010*, pp. 267-268.

⁶ *Bangladesh Population Census Report 2001*, pp.1-4.

⁷ *Bangladesh Economic Review 2010*, Loc. cit.

⁸ *Ibid.*

fertilizer has ensured the use of balanced fertilizers by the farmers. The favorable impacts of those steps in turn have contributed to the increased yield of *Boro*.

Table 1: Production of food grains in Bangladesh (Lakh MT)

Food grain	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
<i>Aus</i>	19.16	18.08	8.51	18.32	15.00	17.45	15.12	15.07	8.95	17.09
<i>Aman</i>	112.5	107.3	11.15	115.21	98.20	108.00	108.00	96.62	16.13	133.07
<i>Boro</i>	119.2	127.7	22.22	124.50	137.00	137.00	145.00	177.62	80.00	183.41
T. rice	250.00	243.00	51.88	258.03	250.20	262.45	268.12	289.31	15.01	322.57
Wheat	16.70	16.06	5.00	15.00	13.00	10.00	7.25	8.44	1.00	9.69
Maize	1.49	1.52	1.00	2.00	3.00	4.00	8.50	13.46	4.00	8.87
Total	269.06	260.58	68.88	275.00	266.20	276.45	283.87	311.21	38.09	341.13

Source: 1) Bangladesh Economic Review of 2003⁹, and 2010¹⁰ T. rice= Total rice

Economic Importance of Crop Share and growth of crop in GDP

The principal cereal crops added value of about Tk 34064 crore to the national economy in 2000-01 financial year¹¹ which increased to Tk 67247 crore in 2009-10 financial year.¹² Agricultural production helps to attain the overall growth of Bangladesh economy. Table 2 and Figure 1 represent the sectoral share and growth of crop in Gross Domestic Product (GDP) at constant market price (Base: 1995-96 price). The data contained in the table indicate that the share of the agriculture sector in GDP at constant price (Base Year: 1995-96) was 25.03% in 2000-01 financial year¹³ which decreased to 20.29% in 2009-10 financial year.¹⁴ On the other hand, growth of crop sub-sector was in an unsteady trend goes up and down. Growth of crop sub-sector was 6.18% in 2000-01 fiscal year and decreased continuously up-to 2004-05 fiscal year at 0.15% (Table 2).¹⁵ The growth was in increasing trend from 2004-05(0.15%) to 2006-07(4.43%) financial year (Figure 1). Decreasing trend was seen from 2006-07 to 2007-08 financial year. Again it was in increasing trend from 2007-08 to 2009-10 financial year.¹⁶

Table 2: Sectoral share and growth of cereal crop in GDP at constant market price (Base: 1995-96 price)

Item	Sectoral share and growth in GDP (%)									
	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Share (%)	14.7	13.7	13.4	13.2	12.5	12.2	12.00	11.6	11.5	11.42
	0	5	3	0	1	8		4		
Growth (%)	6.18	2.39	3.21	1.67	0.15	4.21	4.43	2.67	4.02	4.22

Source: (1) Bangladesh Economic Review of 2003¹⁷, 2006¹⁸ and 2010¹⁹

⁹ Bangladesh Economic Review 2003, p. 63.

¹⁰ Bangladesh Economic Review 2010, Loc. cit.

¹¹ Bangladesh Yearbook of Statistics 2004, p.120.

¹² Bangladesh Yearbook of Statistics 2010, p.106.

¹³ Bangladesh Economic Review 2003, Loc. cit. pp.21-25.

¹⁴ Bangladesh Economic Review 2010, Loc. cit. pp.23-27.

¹⁵ Bangladesh Economic Review 2006, pp.17-26.

¹⁶ Bangladesh Economic Review 2010, Loc. cit.

¹⁷ Bangladesh Economic Review 2003, Loc. cit.

¹⁸ Bangladesh Economic Review 2006, Loc. cit.

¹⁹ Bangladesh Economic Review 2010, Loc. cit.

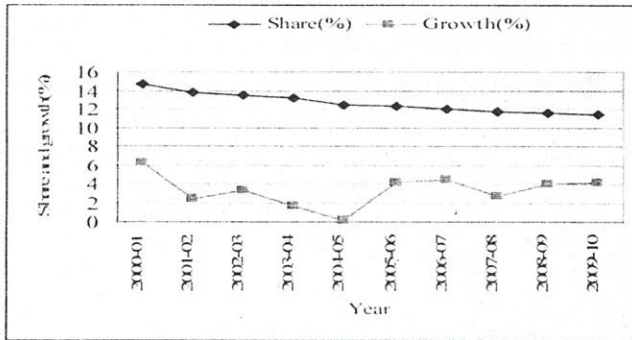


Figure 1: Sectoral share and growth of crop in GDP

Foreign currency earning through export

The export earnings of major agricultural commodities from 2000-01 to 2009-10 fiscal year are presented in Table 3. From the table it is seen that the export earning from major agricultural goods like raw jute, jute goods, agricultural products and tea were 67.18 Million US Dollars, 230.36 Million US Dollars, 18.00 Million US Dollars and 21.58 million US Dollars respectively in 2000-01 financial year²⁰ which increased to 196.27 Million US Dollars, 540.17 Million US Dollars, 242.35 Million US Dollars and 6.65 Million US Dollars respectively in 2009-10 financial year.²¹ The growth was 192%, 134.5%, 1246% and -69% respectively. It was interesting to note that the growth of export earning from tea was negative. Export of raw jute, jute goods and agricultural goods was going up and down. But export of tea was almost in declining trend (Figure 2). The reason might be that during 2000 to 2010 period there was considerable devaluation of our currency (Taka). Although ups and downs were there, overall export trend of agricultural commodities was in an increasing trend. Data in Table 3 also indicate that among the exported agricultural commodities, export of jute goods was always in the highest position from 2000-01 to 2009-10 financial year. Raw jute, tea and agricultural products were in the 2nd, 3rd and 4th position, but after 2001-02 fiscal year the ranking started to change. Finally in 2009-10 financial year the ranking among 4 commodities was- jute goods (1st), agricultural products (2nd), raw jute (3rd) and tea (4th). This indicates that jute and jute goods have a good prospect in earning foreign currency.

Table 3: Amount and growth of export earnings

Goods	Year									
	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
R. Jute	67.18	61.13	82.46	79.76	96.19	148.27	147.15	165.06	148.17	196.27
J. gds	230.36	243.53	257.18	246.45	307.48	361.03	320.78	318.34	269.25	540.17
Ag. pro	18.00	23.00	25.45	41.11	82.47	105.40	87.82	120.13	267.41	242.35
Tea	21.58	17.38	15.47	15.81	15.84	11.89	6.94	14.89	12.29	6.65
Total	337.12	345.04	380.56	383.13	501.98	626.59	562.69	618.42	697.12	985.44

Source: 01) Bangladesh Economic Review of 2003²², 2006²³, and 2010²⁴, Note: M= Million, MUSD=Million US Dollar, R. = Raw, J.= Jute, Ag. pro= Agricultural products.

²⁰ Bangladesh Economic Review 2003, Loc. cit. p.58.

²¹ Bangladesh Economic Review 2010, Loc. cit. p.83.

²² Bangladesh Economic Review 2003, Loc. cit.

²³ Bangladesh Economic Review 2006, Loc. cit. p. 60.

²⁴ Bangladesh Economic Review 2010, Loc. cit.

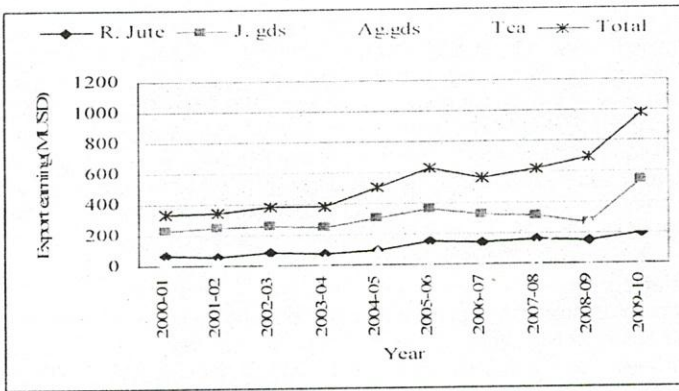


Figure 2: Export earning from agricultural commodities over years

Nutritional Importance of Food Grains

The major food grains grown in Bangladesh are rice, wheat, maize, pulses, oil seeds etc. Bangladesh is the 4th largest rice producing country (7%) in the world where China is in the first position (26%). Rice (*Oryza sativa*) is the staple food of Bangladesh. It has a high food value and it provides 75% energy and 14% protein to human diet.²⁵ The majority of the people of the country take a remarkably high proportion of total calorie intake from rice. Table 4 shows the per capita per day calorie intake and share of rice in calorie intake in seven South-east Asian countries. From the table it is seen that generally the people of Bangladesh take 2100 kcal/day/person of which rice supplies 1580 kcal which is 75% of total calorie intake.²⁶ Among seven South-east Asian countries people of Myanmar take highest calorie from rice followed by Bangladesh, Indonesia, Thailand, Philippines, China and India. People of India eat lowest rice as carbohydrate among South-east Asian countries (Table 4). As a food item rice may be used in different ways like fried rice, *chira*, *muri*, *khai* and so on. Rice is also used as different kinds of cake. We get straw as by-product of rice which is used as feed of cattle, sheep, goat etc. Rice bran is one of the important sources of poultry feed. Wheat and maize are also important crops next to rice produced in Bangladesh. These two crops are used for human food. These cereal grains are also used for animal/poultry feed.

Table 4: Consumption of rice in South-Asian countries

Country	Milled rice consumption (kg/capita/yr)	Total calorie Intake/capita/day	Rice calories/capita/day	% of calories from rice
Myanmar	190	2448	1893	77
Bangladesh	155	2100	1580	75
Indonesia	138	2635	1517	58
Thailand	128	2271	1258	55
Philippines	99	2452	995	41
China	94	2706	959	35
India	66	2243	673	30

Source: International Rice Research Institute, 1995.²⁷

²⁵ M.A. Kabir, Loc.cit

²⁶ International Rice Research Institute, *World Rice Statistics*, Manila, Philippines, 1995.

²⁷ Ibid

Role of Livestock

Livestock play an important role in the national economy of Bangladesh with a direct contribution of around 9% to the agricultural GDP. Livestock sub-sector that includes mainly poultry, dairy, sheep and goat which offer important employment and livelihood opportunities particularly for unemployed rural poor people. It has economic, nutritional, social and industrial importance. About 25% people depend directly on livestock for their livelihood.²⁸ Livestock sub-sector has crucial role in poverty reduction. Demand for high quality animal protein like meat, milk and egg has prompted a rapid growth in livestock sub-sector due to increase in income, rising population and urban growth.

Livestock Population

Livestock population of Bangladesh is presented in Table 5 and Figure 3. From Table 5 it is observed that the number of livestock (cattle, goat, sheep, etc.) was 41.6 lakh in 2000-01 financial year which increased rapidly to 506.5 lakh in 2009-10 financial year.²⁹ The average annual growth was 111.78%. On the other hand, number of poultry birds including chicken and duck was 186.9 lakh in 2000-01 which tremendously increased to 2707.1 lakh in 2009-10 financial year.³⁰ The annual growth was 134.83%. After 2002-03 financial year the number of commercial poultry increased significantly and it was in increasing trend up-to 2009-10 financial year (Figure 3). On the other, hand growth of large animals (cattle, goat, sheep) was somewhat steady. The increase in the number of livestock and poultry is mainly due private entrepreneurship. Huge numbers of poultry and dairy farms have been set up by the interested farmers. But the growth was higher in poultry than that of livestock farms. People are more interested in poultry farming than large animal farming, because poultry business requires less capital as compared to dairy, beef fattening or goat farming. The role of government is also very positive in this regard. The present Government is committed to take necessary steps to achieve self sufficiency in milk, meat and egg to meet the protein demand of the nation.

Table 5: Number of the Livestock and Poultry in Bangladesh (lakh)

Livestock	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Cattle	22.46	22.58	226.0	226.7	228.0	228.7	229.0	229.76	230.5
Buffalo	0.97	1.01	10.6	11.1	11.6	12.1	12.6	13.04	13.49
Goat	16.96	17.69	184.1	191.6	199.4	207.5	215.6	224.01	232.75
Sheep	2.20	2.29	23.8	24.7	25.7	26.8	27.8	28.77	29.77
T. lives.	41.6	42.5	434.5	444.1	464.7	475.1	485.0	495.6	506.5
Chicken	152.2	162.4	1726	1836.	1948.	2069	2125	2213.9	2280.3
Duck	34.67	35.54	364.0	372.8	381.7	390.8	398.4	412.34	426.77
T. poultry	186.9	198.0	2090.3	2207.3	2329.9	2459.7	2523.1	2626.3	2707.1

Source: 1) Bangladesh Economic Review of 2003³¹ and 2010³², Note: T. Lives.= Total Livestock, T. Poultry= Total Poultry.

²⁸ Department of Livestock Services, Ministry of Fisheries and Livestock, Government of the People's Republic of Bangladesh, Dhaka, 2011.

²⁹ *Bangladesh Economic Review 2003*, Loc. cit. p.69.

³⁰ *Bangladesh Economic Review 2010*, Loc. cit. p.99.

³¹ *Bangladesh Economic Review 2003*, Loc. cit.

³² *Bangladesh Economic Review 2010*, Loc. cit.

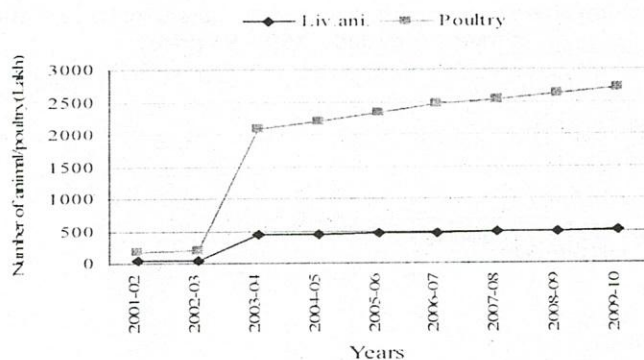


Figure 3: Growth of livestock population over years

Economic Importance of Livestock Share and growth of livestock to GDP

Livestock sub-sector added a value of Tk 6892.9 crore³³ in 2000-01 financial year which increased to Tk 14002.2 crore in 2009-10 financial year.³⁴ The share and growth of livestock sub-sectors are shown in Table 6 and Figure 4. The table shows that the share of livestock sub-sector at constant price (Base Year: 1995-96) was 2.95% in 2000-01 financial year which decreased to 2.65% in 2009-10 financial year. On the other hand growth of livestock sub-sector was 2.81% in 2000-01 financial year which increased to 3.98% in 2009-10 financial year. The data presented in Table 6 indicate that highest growth was found in livestock sub-sector in 2004-05 (7.82%) and 2005-06 (6.31%) financial year. Decreasing trend was found from 2004-05 (7.82%) up-to 2007-08 (2.44%) year.³⁵ This might be due to bird flue in 2007. Again it turned to increasing trend from 2008-09 (3.48%) up-to 2009-10 (3.98%). Figure 4 shows that the share was in up and down tendency from 2000-01 to 2005-06 fiscal year. After 2005-06 financial year the trend was declining up-to 2009-10 financial year. Though ups and downs were there, the average growth of livestock sub-sector was encouraging (Figure 4).

It is an important component of farming system that plays a significant role in the rural economy of Bangladesh. It provides cash income for the rural people particularly for small holding farmers. Income from the sale of chicken, ducks, pigeon and eggs are generally used to meet farm and family expenses. Poultry meat and eggs are used as savings of women and children's capital. These commercial farms have a great contribution to the economy of the country. Several studies reveal that rearing of livestock especially dairy cows and poultry is a profitable enterprise for the farmers.³⁶ It generates income through out the year. Income from poultry and dairy are also used to satisfy their various economic needs. Poultry and dairy farming provides more cash income within a short time.

³³ *Bangladesh Yearbook of Statistics 2004*, Loc. cit.

³⁴ *Bangladesh Yearbook of Statistics 2010*, Loc. cit.

³⁵ *Ibid.*

³⁶ Jahangir Alam, *Livestock Resources in Bangladesh: Present Status and Future Potential*, (Dhaka: The University Press Limited, 1995), p. 134.

Table 6: Sectoral share and growth of livestock sub-sector to GDP at constant market price (Base: 1995–96 price)

Item	Sectoral share and growth of livestock to GDP (%)									
	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Share (%)	2.95	2.96	2.93	2.91	2.95	2.92	2.88	2.79	2.73	2.65
Growth (%)	2.81	4.70	4.51	4.48	7.82	6.31	5.49	2.44	3.48	3.98

Source: 1) Bangladesh Economic Review of 2003³⁷, 2006³⁸ and 2010³⁹.

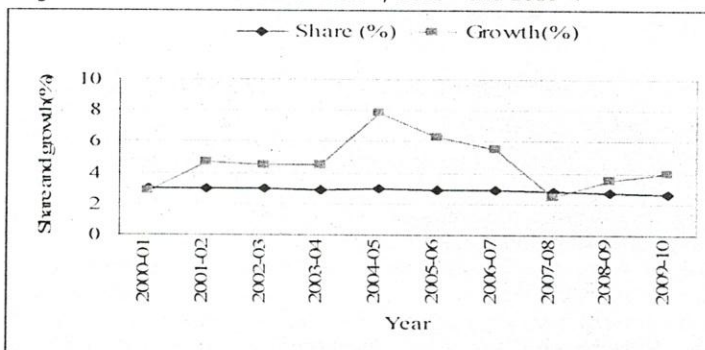


Figure 4: Share and growth of livestock sub-sector to GDP.

Employment opportunities

Contribution of livestock sector in employment generation is shown in Table 7. Livestock farming with a great potential generates self-employment and income for the landless, unemployed youths and women. Small-scale commercial poultry, dairy and goat farming are getting popularity. As a result, employment is being created among the farmers, traders, various backward and forward linkage providers and businessmen. A large number of energetic and hardworking young entrepreneurs are participating in poultry farming to make their fortune. According to Department of Livestock Services (DLS) there were 126899 poultry farms in Bangladesh in 2000-01 financial year in which 1548320 people were employed. After 10 years the number of farms and its employment increased to 300000 and 5000000 respectively in 2009-10 (Table 7).⁴⁰ On the other hand, number of large livestock farms and its employment were 68666 and 491335 respectively in 2000-01 fiscal year which increased to 185320 and 699554 respectively in 2009-10 fiscal year.⁴¹ The growth of employment in poultry and large livestock farms were 223% and 41% respectively. Figure 5 illustrates that though the growth of employment in poultry farms was in increasing trend but the growth of employment in large animal farm was slightly decreased in 2005-06 financial year and again turned into increasing trend in 2009-10 financial year. Expansion of poultry and other livestock farms creates various job opportunities for the unemployed youth through establishment of hatchery, feed mill, pharmaceutical company, equipment manufacturing and marketing of livestock products. In this way it helps the economic growth of the country.

³⁷ *Bangladesh Economic Review 2003*, Loc. cit. pp. 21–25.

³⁸ *Bangladesh Economic Review 2006*, Loc. cit. pp. 17–26.

³⁹ *Bangladesh Economic Review 2010*, Loc. cit. pp. 23–27.

⁴⁰ Department of Livestock Services (DLS), Dhaka, 2011.

⁴¹ *Ibid.*

Table 7: Contribution of livestock sector in employment generation

Farm type	2000-01		2005-06		2009-10	
	Farm	Employment	Farm	Employment	Farm	Employment
Poultry	126804	1548320	211537	2547015	300000	5000000
L. animals	68666	506400	158420	491335	185320	699554
Total	195472	2054720	369957	3038350	485320	5699554

Source: Department of Livestock Services, 2011⁴², Large animals= Dairy, goat and sheep

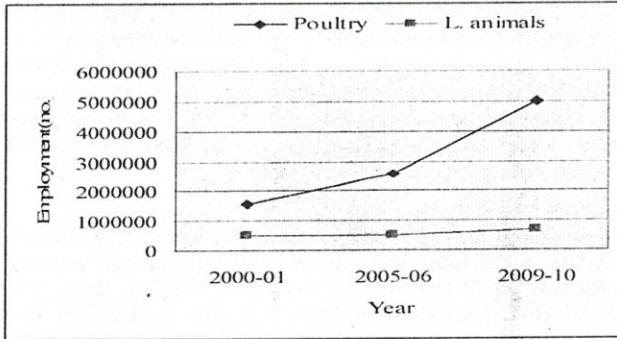


Figure 5: Growth of employment in livestock farms

Nutritional Importance

Meat, milk, egg and fish are the major animal protein sources in human diet. According to the nutritionists, animal protein is superior to plant protein for its well-balanced amino acids and low fiber content. In Bangladesh, poultry meat has a great demand as compared to beef and pork because of religious limitation and health concern. Poultry meat is superior to all other types of meat available for human consumption for its tenderness, palatability, digestibility and leanness. Poultry meat specially, broiler meat can efficiently and rapidly fulfill the shortage of protein requirement. Broiler meat can be produced within the shortest possible time in comparison to other meat producing animals. Poultry sector contribute about 22% to 27% of total animal protein in Bangladesh.⁴³ Poultry eggs contain high quality protein, vitamins and minerals. About 48.5%, 37.2% and 5.66% of people are suffering from mild, moderate and severe malnutrition respectively in Bangladesh.⁴⁴ This situation was created mainly due to shortage of animal protein in the diet. The production of milk, meat (beef, mutton and chicken) and eggs have increased over the past several years. Table 8 summarizes the production statistics of milk, meat and eggs from 2001-02 to 2009-2010 financial year. From the table it is found that the production of milk, meat and egg was 1.78 million metric tons, 0.78 million metric tons and 4424 million respectively in 2001-02 financial year which increased to 2.37 million metric tons, 1.26 million metric tons and 5742 million metric tons respectively in 2009-10 financial year. The growth was 33%, 61% and 30% respectively for the above livestock products.

⁴² Ibid.

⁴³ Q. M. E. Haque, "Rural Poultry in Bangladesh Economy." *Proceedings Fourth National Congress*, Bangladesh Animal Husbandry Association (1992), p.4.

⁴⁴ A. Sultana, "An Economic Analysis of Broiler Production in Mymensingh District", (Mymensingh: Unpublished M.S. Thesis, Department of Agricultural Economics, Bangladesh Agricultural University, 2009), p. 2.

Table 8: Production of livestock products

Products	Production								
	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Milk(MMT)	1.78	1.82	1.99	2.14	2.27	2.28	2.65	2.29	2.37
Meat(MMT)	0.78	0.83	0.91	1.06	1.13	1.04	1.04	1.08	1.26
Egg(M)	4424	4777	4790	5623	5422	5369	5653	4692	5742

Source: 1) Bangladesh Economic Review 2003⁴⁵ and 02) Bangladesh Yearbook of Statistics 2010⁴⁶ M= Million, MT= Million Metric Ton

Contribution of Fishery Sector

Bangladesh is an over populated country. The population of this country is increasing day by day. With the increase of population, the demand for food is also increasing. As an economic activity, fishery ranks second to crop. It is often urged that the future development of this country depends particularly on the agriculture sector. The government of Bangladesh has recognized the importance of agriculture including fishery. Fishery is one of the major components of agricultural activities and plays a dominant role in providing nutrition, employment and foreign exchange earning that helps the economic development of the country.

Production of Fish

Annual production of fish from different water bodies is shown in Table 9 and Figure 6. The data presented in the table show that in 2009-10 financial year the production of sweet water fish was 23.82 lakh metric tons which was four times more than that of marine fish (5.17 lakh metric tons) production (Table 9). Cultured fish production (closed water) (13.52 lakh metric tons) was also higher as compared to captured (open water) (10.20 lakh metric tons) fish production. The inland and marine fish productions were 14.02 lakh metric tons and 3.79 lakh metric tons respectively in 2000-01 financial year⁴⁷ which increased to 23.82 lakh metric tons and 5.17 lakh metric tons respectively in 2009-10 financial year.⁴⁸ The annual growth of fish production was higher in inland water bodies (6.99%) than that of marine (3.64%) one. The growth of inland and total fish production (both inland and marine) was in an increasing trend from 2000-01 to 2009-10 fiscal year (Figure 6). But in case of marine fish production the growth was steady due to lack of proper survey, conservation and sustainable harvest of fisheries resources in the deep sea.

Table 9: Production of fish from different sources

Water body	Production of fish (Lakh Metric ton)									
	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Open wtr.	6.89	7.16	7.92	7.74	8.59	9.57	10.06	10.60	11.24	10.20
Clos. wtr.	7.13	7.55	8.40	8.85	8.82	8.92	9.46	10.06	10.63	13.52
Total inld.	14.02	14.70	16.32	16.59	17.41	18.49	19.52	20.66	21.87	23.82
Mar. Fish	3.79	4.00	4.45	4.67	4.80	4.80	4.87	4.97	5.14	5.17
Total fish	17.81	18.70	20.77	21.26	22.16	23.29	24.40	25.63	27.01	28.99

Source: Bangladesh Economic Review of 2003⁴⁹ and 2010⁵⁰, Note: wtr.= water, Clos.= Closed, Inld.= Inland, Mar. =Marine.

⁴⁵ *Bangladesh Economic Review 2003*, Loc. cit. p. 94.

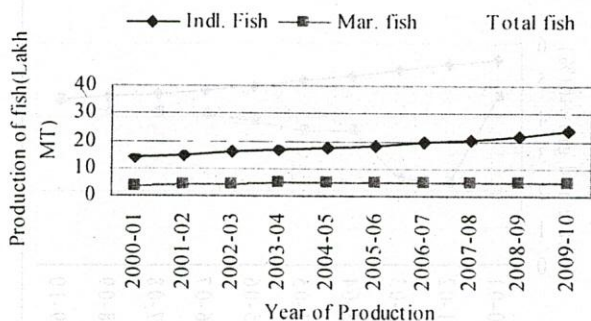
⁴⁶ *Bangladesh Yearbook of Statistics 2010*, Loc. cit. p.153.

⁴⁷ *Bangladesh Economic Review 2003*, Loc. cit. p.69.

⁴⁸ *Bangladesh Economic Review 2010*, Loc. cit. p.97.

⁴⁹ *Bangladesh Economic Review 2003*, Loc. cit.

⁵⁰ *Bangladesh Economic Review 2010*, Loc. cit.



Economic Importance of Fisheries

Share and growth of fisheries to GDP

Fish culture is an old practice in Bangladesh and it plays an important role in socio-cultural and economic life of our population. Fisheries sub-sector added Tk 134061 million⁵¹ in 2000-01 financial year which increased to Tk 218064 million in 2009-10 financial year at current price.⁵² It has important role in GDP of Bangladesh. Table 10 shows the share and growth of fisheries sub-sector to GDP over the years. The share and growth of fisheries in 2000-01 fiscal year at constant price (Base Year: 1995-96) were 5.51% and 4.53% respectively⁵³ which decreased to 4.49% and 4.50% respectively in 2009-10 fiscal year.⁵⁴ It is interesting to note that the share of fisheries sub-sector to GDP was always in a declining trend but after 2001-02 fiscal year its growth was in an increasing trend in the above period (Figure 7). Fisheries in Bangladesh play a major role in generating employment for the poor people. About 1.45 crore people are engaged in fisheries sector for their livelihood.⁵⁵

Table 10: Sectoral share and growth of fisheries to GDP at constant market price (Base: 1995-96 price)

Item	Sub-sectoral share and growth of fisheries to GDP (%)									
	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Share (%)	5.51	5.40	5.25	5.11	5.00	4.86	4.73	4.65	4.57	4.49
Growth (%)	4.53	2.22	2.33	3.64	3.65	3.89	4.07	4.18	4.16	4.50

Source: Bangladesh Economic Review of 2003⁵⁶, 2006⁵⁷, and 2010⁵⁸

⁵¹ *Bangladesh Yearbook of Statistics 2004*, Loc. cit. p.119.

⁵² *Bangladesh Yearbook of Statistics 2010*, Loc. cit. p.106.

⁵³ *Bangladesh Economic Review 2003*, Loc. cit. pp. 21-25.

⁵⁴ *Bangladesh Economic Review 2010*, Loc. cit. pp.23-27.

⁵⁵ মোঃ মাহবুবুর রহমান খান, "মৎস্য সম্পদ ব্যবস্থাপনা উন্নয়ন কৌশল ও জনস্বাস্থ্য সংরক্ষণ", জাতীয় মৎস্য সপ্তাহ সংকলন ২০১১, মৎস্য অধিদপ্তর, মৎস্য ও প্রাণিসম্পদ মন্ত্রণালয়, ঢাকা, পৃ.১৩।

⁵⁶ *Bangladesh Economic Review 2003*, Loc. cit.

⁵⁷ *Bangladesh Economic Review 2006*, Loc. cit.

⁵⁸ *Bangladesh Economic Review 2010*, Loc. cit.

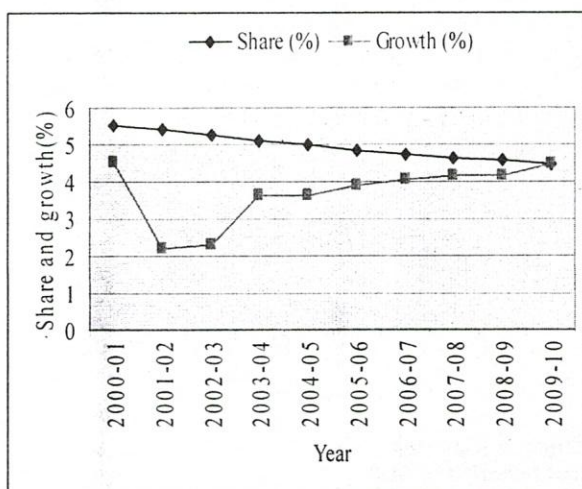


Figure 7: Share and growth of fisheries to GDP

Export earning from fisheries

Bangladesh exported 38988 metric tons of fish and fish products in 2000-01 financial year⁵⁹ which increased to 53109 metric tons in 2009-10 financial year.⁶⁰ So the amount of export of fish and fish products is increasing over the years. Growth in the amount of export of fish was 36%. The export earning of Bangladesh from fisheries sub-sector was 363.23 million US Dollars⁶¹ (5.17% of total export) in 2000-01 financial year which rose to 437.40 million US Dollars (2.70% of total export) in 2009-10 fiscal year.⁶² The export of fish and fish products showed increasing trend from 2000-01 financial year to 2007-08 financial year and after 2007-08 year it shows declining trend (Table 11). Trend in the amount of export of fish was reflected in the export value that is it was in an increasing trend from 2001-02 to 2007-08 year and from 2007-08 to 2009-10 in declining trend (Figure 8). This might be due to amount of exported fish and international market value of fish and fish products.

Table 11: Export of fish and fish products (amount in metric ton and value in million US Dollar)

	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Amount	38988	41482	47371	54141	63377	68829	73704	75299	72888	53109
Value	363.23	276.11	321.81	390.25	420.74	459.11	515.23	534.07	454.51	437.40

Source: 01) Bangladesh Yearbook of Statistics 2010⁶³, 02) Bangladesh Yearbook of Agricultural Statistics 2010⁶⁴, and 03) Bangladesh Economic Review of 2003⁶⁵, 2006⁶⁶ and 2010.⁶⁷

⁵⁹ *Bangladesh Yearbook of Statistics 2010*, Loc. cit. p.116.

⁶⁰ *Bangladesh Yearbook of Agricultural Statistics 2010*, p.317.

⁶¹ *Bangladesh Economic Review 2003*, Loc. cit. p.58.

⁶² *Bangladesh Economic Review 2010*, Loc. cit. p.83.

⁶³ *Bangladesh Yearbook of Statistics 2010*, Loc. cit.

⁶⁴ *Bangladesh Yearbook of Agricultural Statistics 2010*, Loc. cit. p.298.

⁶⁵ *Bangladesh Economic Review 2003*, Loc. cit.

⁶⁶ *Bangladesh Economic Review 2006*, Loc. cit. p.72.

⁶⁷ *Bangladesh Economic Review 2010*, Loc. cit.

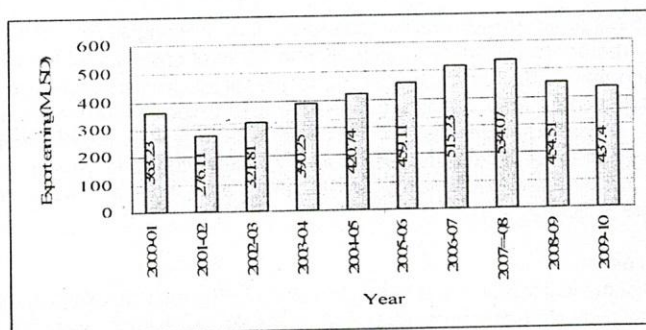


Figure 8: Export earning from fish over years

Nutritional Importance

Most of the people depend on fish which is a principal source of animal protein. Besides this, fish is an important component of total human food. A USAID study reports that poor rural households consume about 50-70 different species of fish annually.⁶⁸ Protein is essential for health and growth of body. Fish alone share about 60% of protein intake and contributes about 74% of animal protein in Bangladesh. It is nutritionally equivalent to protein in meat, high in essential minerals and low in saturated fats.⁶⁹ Fish is high in protein with a balanced proportion of amino acids, vitamin B₁₂ and essential fatty acids and low in cholesterol.⁷⁰ Thus fish can make an outstanding contribution to the nutritional development of Bangladesh. Fish supplies a valuable source of oil containing polyunsaturated fatty acids which are helpful in keeping down the cholesterol level of blood. Demand for fish is also increasing rapidly because of increasing population and shortage of meat. It can be seen from Table 12 that protein content (fresh) is 16.6 to 22.8 gm per 100 gm of fish which is more or less equivalent to other sources of protein i.e. mutton, beef, milk, egg and pulses. The prospect for significantly increasing poultry and livestock products to meet the demand for meat is limited due to continuously increasing pressure on land for the production of cereals. For this reason, fish plays a crucial role to meet the shortage of animal protein and elimination of the malnutrition problem in Bangladesh.

Table 12: Nutrient content of some selected common food items in Bangladesh

Animal sources		Plant sources	
Nutrition item	Protein content (gm/100gm)	Nutrition item	Protein content (gm/100gm)
Chicken	25.9	Pulses	24.5-25.1
Beef	22.6	Wheat	12.1
Mutton	21.4	Rice	7.3
Fish	16.6-22.8	Banana	7.0
Egg	14.0	Vegetables	1.8-5.3

Source: Bangladesh Yearbook of Statistics 2004.⁷¹

Importance of Forestry

⁶⁸ M. Y. Ali, "Fish, Water and People", Ministry of Fisheries and Livestock, Government of the People's Republic of Bangladesh. 1997.

⁶⁹ M.S. Islam, "Factors Affecting Pond Fish Production in North-West Bangladesh", *Bangladesh Journal of Agricultural Economics*, Volume 10(1) (1987), p.32.

⁷⁰ J. Edwards and M. Kaewpaion, "Fish Farming with Livestock Manure", Paper presented at a Seminar on *Maximum Livestock Production from Minimum Land*, jointly organized by Department of Animal Science, Bangladesh Agricultural University, Mymensingh with NYRDP-DANIDA, 1981.

⁷¹ *Bangladesh Yearbook of Statistics, 2004*, Loc. cit. p.278.

There are about 25972.52 sq.km (2.6 million ha) forest land in Bangladesh.⁷² The village people use wood and other forest products as fuel almost free of cost. It supplies food and nutrition, shelter and many other necessities of life to the forest dwellers and rural people since prehistoric days. Forest has versatile importance to the society such as timber for house construction, agricultural implements, boats, carts, furniture, etc. Besides fuel wood and timber, NTFPs (Non-timber forest products) provide many vital forest resources such as food, medicine, honey, essential oil, spice, resin, gum, latex, fiber and floss, bamboo and cane, broom-grass, sun-grass etc.

Production of Forest

Forest production of some major products is shown in Table 13. The data contained in the table indicate that the production of timber wood, fuel wood, *balli*(pole) and bamboo were 36.06 lakh cubic feet, 46.46 lakh, 15.91 lakh and 157.4 lakh cubic feet respectively in 2003-04 financial year, but after seven years the production of these products decreased to 22.06 lakh cubic feet, 9.33 lakh cubic feet and 1.17 lakh respectively in 2009-10 financial year.⁷³ On the other hand, the number of bamboo increased to 182.23 lakh pieces in 2009-10 financial year. The growth of production of above three main forest products was negative and decreased by 39%, 80% and 93% respectively. Only the production of bamboo increased by 18%. The data also indicate that there were ups and downs in the production of forest. The reason behind it might be mismanagement in production and protection of forest resources.

Table 13: Forest Production over years

Products	Unit	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Tim. wood	Lakh cft	36.06	52.16	33.24	7.48	15.46	8.54	22.06
Fuel wood	Lakh cft	46.46	66.39	31.17	8.44	12.24	6.00	9.33
Balli(Pole)	Lakh	15.91	6.99	5.28	0.28	0.90	0.94	1.17
Bamboo	Lakh	157.4	570.5	682.8	702.3	731.7	495.93	182.23

Source: Department of Forest, March, 2012.⁷⁴

Economic importance of Forest

Share and growth of forest to GDP

Forestry is an important sector in the economy of Bangladesh. The gross value added by forestry sub-sector to the GDP was Tk 4674.4 crore⁷⁵ in 2000-01 financial year which increased to Tk 8177.5 crore in 2009-10 financial year at current price.⁷⁶ The contribution of forestry to GDP in 2000-01 financial year at constant price (Base Year: 1995-96) was 1.87%⁷⁷ which decreased to 1.73% in 2009-10 financial year.⁷⁸ If contribution in people's livelihood could have been properly assessed then the share of the forestry sector would have been much more. On the other hand, the growth of forestry was 4.85% in 2000-01 financial year which rose to 5.23% in 2009-10 financial year (Table 14). Figure 9 illustrates that the share of forestry was a decreasing trend at a slower rate but in case of growth the trend was increasing from 2003-04 financial year to 2008-09 financial year. After 2008-09 financial year it slightly decreased up-to 2009-10 financial year.

⁷² *Yearbook of Agricultural Statistics of Bangladesh 2010*, Loc. cit. p.280.

⁷³ Department of Forest, March 2012. www.bforest.gov.bd, (Accessed on 25.03.2012)

⁷⁴ *Ibid.*

⁷⁵ *Bangladesh Yearbook of Statistics 2004*, Loc. cit. p.119.

⁷⁶ *Bangladesh Yearbook of Statistics 2010*, Loc. cit. p.106.

⁷⁷ *Bangladesh Economic Review 2003*, Loc. cit. pp.21-25.

⁷⁸ *Bangladesh Economic Review, 2010*, Loc. cit. pp.23-27.

Table 14: Sectoral share and growth of forestry to GDP at constant market price (Base: 1995–96 price)

Items	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Share (%)	1.87	1.88	1.86	1.83	1.82	1.79	1.76	1.75	1.75	1.73
Growth (%)	4.85	4.91	4.43	4.18	5.09	5.18	5.24	5.47	5.53	5.23

Source: Bangladesh Economic Review of 2003⁷⁹, 2006⁸⁰, and 2010.⁸¹

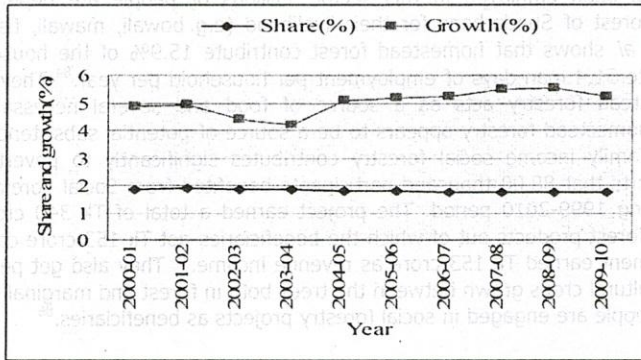


Figure 9: Share and growth of forestry to GDP

Revenue earnings from forest

Table 15 shows the amount of revenue earned from forest production over the years. From the table it is seen that revenue earnings from timber wood, fuel wood, *balli*, bamboo and others (minor forest) were Tk 14.36 crore, Tk 4.16 crore, Tk 10.04 crore, Tk 6.22 crore and Tk 2.32 crore respectively in 2003-04 financial year. In 2009-10 financial year revenue earnings from timber wood and other minor products increased to Tk 36.92 crore and Tk 5.88 crore respectively. The growth was 157% and 153% respectively. On the other hand earning from fuel wood, *balli* and bamboo decreased to Tk 1.43 crore, Tk 2.68 crore and Tk 4.25 crore respectively. The growth was negative for the above three products. Revenue earning was the highest in timber wood (Tk14.36 crore) followed by *balli* (pole), bamboo, fuel wood and others in 2003-04 fiscal year. The product wise ranking was the same after seven years (2009-10). The total revenue earnings were Tk 37.10 crore in 2003-04 fiscal year which increased to Tk 51.16 crore.⁸² The overall growth was 38%. The data shown in Table 15 illustrate that there was ups and downs in revenue earnings by forest products individually which was reflected in the total revenue from 2003-04 to 2009-10 fiscal year.

Table 15: Revenue earning from forest products (in crore taka)

Products	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Tim. wood	14.36	76.97	86.97	38.80	49.84	24.51	36.92
Fuel wood	4.16	4.14	4.40	1.18	3.18	1.45	1.43

⁷⁹ Bangladesh Economic Review 2003, Loc. cit.

⁸⁰ Bangladesh Economic Review 2006, Loc. cit. pp.17–26.

⁸¹ Bangladesh Economic Review 2010, Loc. cit.

⁸² Department of Forest, Ministry of Environment and Forest, Government of the People's Republic of Bangladesh, Dhaka, www.bforest.gov.bd (Accessed on 25.03.2012).

Balli(Pole)	10.04	3.89	4.19	0.25	0.42	0.70	2.68
Bamboo	6.22	5.38	5.97	7.02	6.85	5.96	4.25
Others	2.32	5.31	5.07	3.42	4.58	4.97	5.88
Total	37.1	95.69	106.6	50.67	64.87	37.59	51.16

Source: Department of Forest, March, 2012.⁸³

Role of forest in income generation

Many people benefited directly from forestry related activities e.g. from wood based industry, saw milling, furniture making, establishing private nursery, logging, extraction and in afforestation programs. According to Department of Forest more than 10 lakh people have been employed in this sector. Millions of people are dependant on the mangrove forest of Sundarbans for their livelihood (e.g bowali, mawali, fisherman etc). Rahman *et al.* shows that homestead forest contribute 15.9% of the household income and generate 51.4 man-days of employment per household per year.⁸⁴ They also observe that homestead forestry acts as a source of food and several necessary household materials. Homestead forestry appears to be a source of potential subsistence income. By increasing family income social forestry contributes significantly to poverty alleviation. Ahmad reports that 88.00 thousand participants benefited from Social Forestry Plantation Project during 1999-2010 period. The project earned a total of Tk 340 crore from sale precede of forest products out of which the beneficiaries got Tk 153 crore collectively and the government earned Tk 153 crore as revenue income.⁸⁵ They also get periodic income from intercultural crops grown between the trees both in forest and marginal land. About 5 lakh rural people are engaged in social forestry projects as beneficiaries.⁸⁶

Problems in the Agricultural Sector

Problems in crop sub-sector

- High price of production inputs cause higher production cost
- Below quality production input likes seed, fertilizer, pesticides etc.
- Lack of sufficient capital for agricultural production
- Uncertainty of getting fair price of agricultural commodities
- Underdeveloped marketing system
- Lack of regular training
- Lack of preservation facilities

Problems in Livestock Sub-sector

- High price of feed and day-old-chick
- Frequent occurrence of diseases
- Limited coverage of veterinary services
- Lack of credit support
- Inadequate and improper market facilities
- Lack of proper veterinary services
- Price fluctuation of poultry and livestock products
- Lack of training of the farmers.

⁸³ Ibid.

⁸⁴ Rahman *et al.*, "Homestead forest resources and their role in household economy: A case study in the villages of Gazipur Sadar Upazila of central Bangladesh" *Small Scale Forestry*, Volume 4(3) (2005), pp.359-376.

⁸⁵ ইশতিয়াক উদ্দিন আহমদ, প্রধান বন সংরক্ষক, বন অধিদপ্তর, পরিবেশ ও বন মন্ত্রণালয়, গণ প্রজাতন্ত্রী বাংলাদেশ সরকার, ঢাকা, "প্রকৃত ও দরিদ্র জনগণের জন্য সামাজিক বনায়ন", জাতীয় বৃক্ষ রোপন অভিযান ও বৃক্ষ মেলা ২০১১ উদযাপন উপলক্ষে প্রকাশিত স্মরণিকা, পৃষ্ঠা-১৭।

⁸⁶ Ibid.

Problems in Fisheries Sub-sector

- Unavailability of quality fish seed from reliable source
- High price of quality feed and fish seed
- Limited access to financial institutions for capital
- Spread of disease
- The challenges in sustainable harvesting of marine fisheries
- Lack of training of the farmers.

Problems in Forestry Sub-sector

- Excessive and uncontrolled deforestation
- Illegal trees and wood cutting from forest
- Conversion of forest lands for crop production
- Overexploitation of economically important forest resources
- Natural calamities like occasional landslide, erosion, flood, cyclone, tornado etc.
- Spread of diseases in forest like top dying disease
- Lack of proper management and awareness.

Solution to Overcome the Problems in Agriculture Sector**Solutions for Crop Sub-sectors**

- ❖ Timely supply of agricultural inputs to the farmers at affordable prices
- ❖ The remunerative price of agricultural products should be ensured at growers' level
- ❖ Farmers should be trained by agricultural extension personnel regularly
- ❖ Appropriate action plan for agricultural credit and marketing
- ❖ Creating preservation facilities for agricultural goods
- ❖ Agricultural mechanization
- ❖ Greater co-ordination between the government, NGOs and private sectors
- ❖ Lowering the price of irrigation appliances and inputs

Solutions for Livestock Sub-sector

- ❖ To reduce feed and day-old-chicks price
- ❖ Sufficient credit supply
- ❖ Ensuring veterinary services
- ❖ Prevention and control of diseases
- ❖ Arranging regular training for the farmers
- ❖ Maintaining stability in market price
- ❖ Production of feed ingredient in Bangladesh
- ❖ Good management and market coordination

Solutions for Fisheries Sub-sectors

- ❖ Ensuring good quality fish seeds to the farmers
- ❖ Supply of high quality feed at reasonable price
- ❖ Farmers should be trained by extension personnel regularly
- ❖ Credit should be available on easy terms
- ❖ Creating a modern and sustainable information system for agricultural market;
- ❖ Creating facilities for shrimp exporters.

Solution for Forestry Sub-sectors

- ↓ Uncontrolled forest cutting should be strictly prohibited
- ↓ Plantation of fast growing industrial woods on suitable deforested sites
- ↓ Sustainable forest management

- ↓ Forests should be replanted with trees through reforestation process
- ↓ For each cut tree, a new one should be replanted
- ↓ Creating awareness about environmental degradation resulting from unlawful tree cutting
- ↓ Using coal instead of firewood may be a good solution against tree cutting
- ↓ Strict application of existing laws regarding forest conservation.

Conclusion

Agriculture is the backbone of the economy. The production of food grains (rice) has reached almost to the country's annual food requirement. Growth of fisheries and livestock especially commercial poultry is remarkable. Contribution of forestry is also noticeable. So, agriculture is the determining factor for food security as well as for the development of Bangladesh economy. It plays a crucial role in food and nutrition, employment, and overall economic improvement of the country. The broad agriculture sector plays a very important role in the economy of the country accounting for 20.29% of total GDP in 2009-10 at constant (1995-96) prices. Of the agricultural GDP, the crop sub-sector contributes 63%, livestock 11%, fisheries 19% and forest 7%. This sector generates 60% of total national employment of which crop sub-sectors share is the highest. Bangladesh earned 1652.36 million US Dollars by exporting agricultural products in 2009-10 financial year which was 10.19% of total national export. But such a versatile sector is suffering from a lot of problems for several years. Though the problems are multidimensional but solution is not impossible. Hence, the government should give highest priority to solve those problems to make this sector profitable. If government and non-government organizations (NGOs) take joint initiatives then agriculture sector will be able to play its vital in the economic development of Bangladesh.

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