Volume 11
Number 1
Year 2009
ISSN 1529-0905

Journal of BANGLADESH STUDIES

BDI
Bangladesh Development Initiative

JOURNAL OF BANGLADESH STUDIES (ISSN 1529-0905)

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Articles are solicited from authors engaged in a variety of fields including agriculture, anthropology, basic sciences, business, economics, education, engineering, management, political science, psychology, sociology, and related fields. This diversity of perspective is sought by JBS because comprehensive development requires a broad foundation of knowledge. The articles should, therefore, address Bangladesh's development problems and prospects from a theoretical or analytical perspective prevalent in academic disciplines. Authors are also encouraged to prescribe measures that are meaningful, practicable, and amenable to the sector(s) or issues they address. Articles must also be comprehensible to the wide target audience. Thus, while the articles must be grounded in theory, analysis, and referenced

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Dr. Syed Saad Andaleeb
Professor and Program Chair, Marketing; Sam and Irene Black School of Business
The Pennsylvania State University at Erie, Station Road, Erie, PA 16563-1400.
Fax (814)-898-6223; e-mail ssa4@psu.edu

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FROM THE EDITOR

As Bangladesh continues to search for ways to attain economic, political, social, and cultural emancipation, the need for additional, systematic, sustained and serious research to harness knowledge for the country's growth and emancipation objectives is abundantly clear. Consequently, the production of such research, especially in the halls of academe in Bangladesh, must improve both in quality and quantity.

The Journal of Bangladesh Studies has continued to publish quality research for academia, policy makers, government functionaries, development agencies, the media, and the general public on a sustained basis to shed light on issues that need enlightened engagement. Our efforts to disseminate knowledge on Bangladesh through other mechanisms have also borne fruit. For example, the conference at Harvard University -- "Bangladesh in the 21st Century"-- in June 2008, which brought together many scholars from all over the world to deliberate on Bangladesh's priorities, was a huge success. Enthused by such success, a second conference – Ideas and Innovations for the Development of Bangladesh: The Next Decade – is in its final planning stages to be held at the Kennedy School of Government, Harvard University in October 2009. These conferences are a rich source of research materials that JBS seeks to publish.

Through its parent organization, Bangladesh Development Initiative or BDI (www.bdiusa.org), JBS has also launched a book publication program that has been highly successful (http://www.bdiusa.org/publications/). JBS will continue to seek ways of facilitating a knowledge revolution in the country that is perhaps the only sustainable means to stable growth. Unless a strong foundation of knowledge is established through high quality research, it is unlikely that Bangladesh will be able to attain rapid and sustainable growth in an increasingly competitive world fueled by new ideas and innovations that are generated on the bedrock of research-based knowledge.

In this issue of the JBS, we introduce six research articles that add new insights into the policy discourse that is essential for Bangladesh's development. Rahim Quazi and Munir Quddus address the vital question of how to facilitate greater inflow of foreign direct investments (FDI) that, according to researchers, have contributed enormously to Asia's modernization and economic development – especially India and China. Using econometric modeling for the case of four South Asian economies, the authors show where Bangladesh is lacking: in infrastructure, in economic freedom, and in the significant political risks that are generated by party politics. Specifically, the pervasiveness of corruption, crime and disorder, underdeveloped financial markets, excessive regulation, and the problem of human capital seem to be strong deterrents to Bangladesh's ability to attract FDI at rates demonstrated by other Asian countries.

Joe Devine breaks new ground in the area of NGO studies, focusing on the various informal practices of the social actors that drive NGO activities and accomplishments. In particular he considers three factors – political mobilization, brokering skills and opening up livelihood opportunities – as important elements in explaining NGO successes. Examining the issue of *khas land* allocation, he contends that political mobilization of the landless and poor is an important factor that keeps the local elite from occupying the *khas lands* allotted to the landless because they (the elite) are often of national stature as politicians and bureaucrats representing the dominant class.

It is also interesting to note how brokering skills can help reduce the influence of the elite. Such skills are strengthened by the informal networks that are developed at various levels by the NGO leadership to be able to counteract the influence of the local elite, thereby assuring the landless their rights to property and advancement. In the process, however, it appears that new forms of patron-client relationships emerge where the local elites are simply replaced by the NGO leadership who attain "significant discretionary influence." And this influence is often used to allot land primarily to those who are members of the NGO and not the non-members. In other words a subtle form of discrimination takes root, despite this not being the intention, while ensuring the rights of the poor and landless. Another insight that emerges from the study is the ephemeral nature of power: A key member of the NGO who was widely respected and who was deeply instrumental in the growth of the NGO was effectively pushed out when he took a stand against a collective decision on a political matter. Despite the member's contributions, informal connections, and high position, a lone stance was quickly overwhelmed by charges of disloyalty, abuse of position and corrupt dealings. Apparently, the key member failed to detect the emerging countervailing power within the organization by his secure feelings

of leadership and power in the organization. Déjà vu indeed!

Halimur R. Khan combines population growth projections in Bangladesh with the capacity of the education system to absorb the young population in the classrooms of Bangladesh. His analysis is thought-provoking, suggesting that the government take a serious peek into the future to understand the kind of capacity that it needs to build to accommodate the coming generations. For example, by 2025 Khan's analysis indicates the need to build 733 colleges and recruit 21,353 teachers for higher secondary education. At higher levels, an addition of 24 universities and 3,353 teachers will be needed at the current student teacher ratios. But it is likely that the demand for education will be higher and become ever more important in securing a job and achieving higher standards of living. With such increases in demand for higher education, the capacity of the system is likely to be very inadequate to absorb and serve the unprecedented numbers aspiring to attain a higher degree. Unless appropriate measures are undertaken "now", even to be partially ready, the future portends chaos and turmoil. Educational planners must be cognizant of the impending needs and begin to prepare for the exigencies without further ado.

Syed Saad Andaleeb offers a comparative analysis of "perceived" service quality provided by "reputed" hospitals from the public and private sectors in Dhaka City in Bangladesh. The same measures of service quality were also applied to hospitals overseas (mainly from neighboring countries) where Dhaka residents obtained healthcare services. Using ANOVA, significant differences were found between the three groups on selected service quality measures. The findings suggest that hospitals in Bangladesh have much room for improvement. When these improvements are brought about, it can help stem the outflow of foreign exchange to neighboring country hospitals. It important, therefore, for the Bangladesh hospitals to establish minimum standards by benchmarking their services with the foreign hospitals. As standards are raised, it ought to bring back the confidence of the local people in their own hospitals.

Mohammad A. Rahman assesses the technical efficiency of private medical clinics in Bangladesh that have a huge role to play in maintaining the country's productive capacity. Using data envelopment analysis (DEA) the author shows the extent to which inefficiencies exist in the clinic-setting in terms of their staffing. Suggesting how staffing patterns can be significantly improved to attain full efficiency, the paper also indicates how many more patients could be efficiently served if the clinics conducted efficiency analysis and adopted "best practices" protocols to enhance performance.

Finally, Nazia Habib-Mintz examines the shrimp industry that has been an important export earner, contributing about US $270 million to the Bangladesh economy. In recent times, however, market liberalization has increased the insecurities of the actors in the industry via price distortions and non-tariff barriers, especially health and food safety regulations. Non-compliance with health regulations have even led to the ban of shrimp exports to areas such as the European Union. According to the author, the industry is reeling from external pressures and even seems to be retrogressing for a number of reasons including quality problems, institutional weaknesses, inadequate incentives in the value chain (VC), cost adjustments that hurt the poor, etc. Under the circumstances, the author explores ways of re-invigorating the industry via more coordination between economic and social authorities that can lead to faster industrial development and economic growth.

JBS continues to solicit well-researched articles that offer comprehensive and innovative answers to Bangladesh's development challenges. In this pursuit among researchers in Bangladesh, it is important for a research mindset to evolve, especially in the realms of higher education institutions. From committing more resources for research activities, providing mentorship and training to junior scholars, establishing rewards and recognition for quality research, establishing high quality journals, and building collaborative research programs between universities, there must be a palpable sense that research is considered a more mainstream activity in the halls of academia. Until this happens, the quality of research in Bangladesh will remain mediocre and its influence on decision-making at the national level will remain minimal.

Syed Saad Andaleeb, Ph.D.
Editor, JBS
Professor and Program Chair, Marketing
Black School of Business
Penn State Erie
Erie, PA 16563-1400, USA

Foreign Direct Investment and Investment Climate: Comparing Bangladesh with Selected Countries in South Asia

Rahim Quazi
and
Munir Quddus

Abstract

Since the early 1980s, developing countries have eagerly sought to increase the influx of foreign capital. This paper analyses recent trends in capital inflows as measured by Foreign Direct Investment (FDI) for selected economies in South Asia - Bangladesh, India, Pakistan and Sri Lanka. Amongst the four, the average ratio of FDI to GDP is the lowest for Bangladesh, suggesting that the country may have a locational disadvantage in attracting FDI vis-à-vis the other three countries. Using a panel regression model, this study finds that inward FDI in these sample economies is significantly enhanced by foreign investors' familiarity with the host economy and better infrastructure, and the inflow is significantly depressed by the lack of economic freedom and increased political risk. Furthermore, this study finds that FDI inflows are negatively correlated with policies that diminish a country's economic freedom (as measured by the *Economic Freedom Index* published by the Heritage Foundation). Finally, this study identifies several barriers – poor infrastructure, pervasive corruption, crime and disorder, underdeveloped financial markets, excessive regulations, and inadequate human capital, which seem to have created a location based disadvantage for Bangladesh in attracting FDI.

Introduction

Foreign direct investment (FDI) is generally defined as the process that global investors utilize to acquire ownership of capital and controlling interest in an enterprise in a host country. The World Bank *World Development Indicators* defines inward FDI as "the net inflows of investment to acquire a lasting management interest in an enterprise operating in an economy other than that of the investor" (World Bank 2006, p. 319). Although there is no consensus on what constitutes "controlling interest" or "management interest", a minimum of 10% ownership of voting stocks or equivalent by a single investor is commonly regarded as such (Moosa 2002).

Inward FDI not only serves the long-term financial interests of foreign investors, it can also play a significant role in the growth dynamics of host countries. The literature holds that FDI inflows can help plug several "development gaps" in developing countries. FDI can fill the "investment gap" by providing capital for domestic investment; secondly, FDI can fill the "foreign exchange gap" by providing foreign currency through initial investments and subsequent export earnings; and lastly, FDI can help close the "tax revenue gap" by generating tax revenues through creation of additional economic activities (Smith 1997). Many empirical studies have concluded that FDI can also help generate domestic investment in matching funds, facilitate transfer of managerial skills and technological knowledge, increase local market competition, create modern job opportunities, increase global market access for export commodities, etc. Moosa (2002) provides a good literature review of recent studies on this subject. For example, Elahee and Pagan (1999) found that FDI has promoted economic growth in Latin America, and Fan and Dickie (2000) concluded that FDI accounted for 4%-20% of GDP growth in Asia.[1]

Recognizing the many benefits of FDI, developing countries have generally eased restrictions on foreign capital inflows since the early 1980s. Furthermore, the end of the Cold War in the early 1990s resulted in a new political dynamics that forced LDCs, hitherto heavily dependent on foreign public aid regardless of their political ideological leanings, to seek out alternative sources of foreign private capital. Trends in information and communication technologies (ICT) and globalization have also resulted in greater integration of capital markets easing the flow of capitals across the globe. As a result, the annual FDI inflows to developing countries increased from $23 billion (0.7% of their combined GDP) in 1990 to about $211 billion (2.6% of GDP) in 2004. The South Asian countries, led by India, have witnessed a massive rise in their annual FDI inflows from a meager $0.55 billion (0.1% of combined GDP) in 1990 to $7.15 billion in 2004 (0.8% of GDP) (World Bank 2006).

There are four countries in South Asia (Bangladesh, India, Pakistan and Sri Lanka) that have benefited from higher FDI inflows over the last several decades. Tables 1 and 2 below show some FDI statistics, which reveal that Bangladesh has lagged behind the other three countries in attracting these funds both in absolute level and share of GDP. A study by UNCTAD (2005) published a ranking of 140 countries based on their potential and actual performance in attracting FDI. Table 3 below shows the potential and performance index for these four countries suggesting that Pakistan and Sri Lanka have performed better than their potential, but Bangladesh and India have performed below their FDI potential (for example, in 2003 Bangladesh had the potential to be ranked 115th, but was actually ranked 132nd). These figures also point out that while Bangladesh has generally ranked below the other three countries in terms of FDI performance, but in terms of FDI potential the country has consistently ranked higher than Pakistan and Sri Lanka since 2000. It appears that Bangladesh faces some significant hurdles to achieving its FDI potential.

Table 1: FDI Inflows to the Sample Countries

Country	Total FDI Inflow (1972-2004)	Average FDI/GDP (1972-2004)	Difference with Bangladesh
Bangladesh	$1.72 billion	0.12%	---
India	$41.01 billion	0.28%	+ 0.16%
Pakistan	$9.44 billion	0.52%	+ 0.40%
Sri Lanka	$3.01 billion	0.81%	+ 0.69%

Source: *World Development Indicators*, World Bank (2006)

Table 2: FDI/GDP Ratio for Sample Countries (1995-2004)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Average
Bangladesh	0.01	0.03	0.33	0.43	0.41	0.62	0.17	0.11	0.52	0.79	0.34
India	0.60	0.63	0.87	0.64	0.49	0.78	1.15	1.11	0.76	0.77	0.78
Pakistan	1.19	1.46	1.15	0.81	0.84	0.42	0.54	1.15	0.65	1.16	0.94
Sri Lanka	0.43	0.86	2.85	1.22	1.12	1.06	1.09	1.19	1.26	1.16	1.22
Average	0.56	0.75	1.30	0.78	0.72	0.72	0.74	0.89	0.80	0.97	0.82

Source: *World Development Indicators*, World Bank (2006)

Table 3: FDI Potential (Potn) & Performance (Perf) Index for Sample Countries

Country	1990		1995		2000		2001		2002		2003	
	Potn.	Perf.	Potn.	Perf.	Potn.	Perf.	Potn.	Perf.	Potn.	Perf.	Potn.	Perf.
Bangladesh	102	103	118	128	107	125	117	127	113	127	115	132
India	41	98	61	110	44	120	44	121	41	121	38	118
Pakistan	92	71	113	89	130	117	131	120	127	118	125	113
Sri Lanka	116	108	138	114	125	62	121	58	118	41	116	24

Source: *World Investment Report*, UNCTAD (2005)

This study statistically estimates the determinants of inward FDI for these four countries, and attempts to identify, from the perspective of foreign firms, factors that can explain why Bangladesh has lagged behind the neighboring countries as a destination of FDI. The study adds to our knowledge of factors that affect the dynamics of FDI. This should be helpful in devising strategies and policies to attract FDI into developing countries.

Literature Review

An extensive literature exists on the study of determinants of FDI. Most of these studies have identified domestic economic environment, market size, quality of infrastructure, labor cost, economic openness, return on capital, political stability, etc. among the key variables that drive the flow of FDI. There are many instances of conflicting findings regarding the direction of influence of the determinants of FDI (Chakrabarti 2001). Notwithstanding these differences, the FDI literature has continued to grow and capture the fascination of applied development economists and policy makers.

Many FDI studies have found that domestic market size is a significant determinant of FDI. Scaperlanda and Mauer (1969) put forth the hypothesis that FDI inflow responds positively to the recipient country's market size once it grows beyond a threshold level large enough to allow economies of scale. Several studies, such as Schneider and Frey (1985) and Wheeler and Mody (1992), have empirically confirmed this hypothesis for developing countries.

Availability of skilled workers can significantly boost the global competitiveness of a host country. Noorbakhsh et al (2001) and Schneider and Frey (1985) found that the level of human capital, a good indicator for the availability of a skilled work force, is a significant determinant of the locational advantage of a host country.

Many studies have found that political instability seriously erodes foreign investors' confidence in the local investment climate. Barro (1991) and Corbo and Schmidt-Hebbel (1991) state that political instability creates an uncertain economic environment detrimental to long-term planning, which reduces economic growth and investment opportunities.

Noorbakhsh et al (2001) found that FDI inflows respond positively to lagged changes in FDI, which can be used as a proxy for the level of familiarity foreign investors have about a particular country. Jaspersen et al (2000) and Asiedu (2002) found that the rate of return on investment positively affects FDI, while Wheeler and Mody (1992) and Asiedu (2002) found that availability of infrastructure significantly boosts FDI.

In a study of the impact of economic freedom and investment climate on FDI in Latin America, Quazi (2007) found that FDI inflow is negatively correlated with policy changes that result in diminished economic freedom, and excessive bureaucracy and inefficient financial markets have created locational disadvantages for Mexico vis-à-vis other countries in the region.

Moosa (2002) provides a summary of many recent studies that investigated the determinants of FDI. For example, Lehmann (1999) found that political and economic risks deter FDI; Cheng and Kwan (2000) found that regional market size, good infrastructure and preferential policy affect FDI location in China; and Tuman and Emmert (1999) found that market size, economic policies and political instability affect Japanese FDI in Latin America.[2]

A few studies have statistically estimated the determinants of FDI in South Asia. For example, Quazi and Mahmud (2006) used 1995-2000 panel data for five South Asian countries (Bangladesh, India, Nepal, Pakistan and Sri Lanka) and found that the significant determinants of FDI in this region are economic freedom, trade openness, market size, human capital, incremental lagged changes in FDI, and political instability. Sahoo (2006) used 1975-2003 panel data for the same group of countries and found significant determinants of FDI include market size, labor force growth, infrastructure and trade openness. It should be noted here that South Asia did not receive a steady flow of FDI until the early 1990s; therefore, models with FDI data from the 1970s will not adequately capture the current FDI dynamics in the region.

This study makes three contributions to the South Asian FDI literature --first, it investigates the determinants of FDI with 1995-2004 panel data, secondly, it examines the relationship between FDI and economic freedom, and thirdly, it analyzes foreign firms' perspectives about the host country investment climate.

An Econometric Model

Empirical models found in the FDI literature have

typically included subsets of the following variables as determinants of FDI --incremental lagged changes in FDI (ΔFDI_{t-1}), economic freedom, trade openness, domestic market size, human capital, infrastructure, return on investment, political instability, etc. In the absence of a consistent theoretical framework to guide the empirical work, this study formulates the following general-to-specific model. Since the model is estimated with panel data (time-series data from a cross-section of countries), subscript *i* refers to countries and subscript t refers to time.

$$FDI_{i,t} = \alpha + \beta_1 \Delta FDI_{i,t-1} + \beta_2 \text{Economic Freedom}_{i,t} + \beta_3 \text{Market Size}_{i,t} + \beta_4 \text{Human Capital}_{i,t} + \beta_5 \text{Infrastructure}_{i,t} + \beta_6 \text{Return on Investment}_{i,t} + \beta_7 \text{Political Risk}_{i,t} + \varepsilon_{i,t}$$

It should be noted here that the model excludes several variables routinely found in the literature as significant determinants of FDI, such as trade openness, financial liberalization, inflation, tax policies, etc., which are in fact captured by the Economic Freedom (*EF*) Index, explained below.

Model Rationale

Lagged Changes in FDI (ΔFDI_{t-1}): Incremental lagged changes in FDI (ΔFDI_{t-1}) should positively affect the current level of FDI (FDI_t) for several reasons. First, it is generally accepted that foreign investors are typically risk-averse and tend to avoid new territories. Therefore, it is important for host countries to establish a track record of receiving FDI, which in turn will attract additional FDI, setting a virtuous cycle in motion. Furthermore, many multinational corporations (MNCs) may test new markets by staggering their investment, which gradually reach the desired level after some time adjustments.

Economic Freedom: The domestic investment climate plays a critical role in attracting foreign capital into host countries. However, the investment climate, determined by a host of economic and non-economic qualitative factors, is difficult to quantify. Since 1995, *The Heritage Foundation* and *The Wall Street Journal* have jointly published a proxy for domestic investment climate--the annual Index of Economic Freedom (*EF*), which is defined as "the absence of government coercion or constraint on the production, distribution, or consumption of goods and services beyond the extent necessary for citizens to protect and maintain liberty itself" (Heritage Foundation, 2006; p. 56).

The *EF* index broadly reflects the extent to which an economy is pursuing free market policies. The index is constructed by incorporating 50 independent variables under 10 broad categories --trade policy, fiscal burden of government, government intervention in the economy, monetary policy, capital flows and foreign investment, banking and finance, wages and prices, property rights, regulation, and black market activity. These factors are weighted equally in constructing a country's overall index score on a scale of 1 to 5. A score of "1" signifies a consistent set of policies most conducive to economic freedom, while a score of "5" signifies the opposite. Therefore, countries with lower *EF* scores should attract more FDI vis-à-vis countries with higher scores.

The *EF* index is constructed using several variables, such as trade policy, monetary policy, banking, wages, etc., which have been frequently used in the literature as determinants of FDI. Since these variables are already captured by the *EF* index, it would be statistically inappropriate to include the index along with these variables as determinants of FDI, which would introduce multi-collinearity in the model. Therefore, these variables are excluded from our model.

Market Size: An important determinant of "market seeking" FDI, where the primary objective of MNCs is to serve the domestic market, is the market demand of MNC product in host countries. This type of FDI generally avoids poor countries, where consumers do not have adequate purchasing power. The average per capita annual income in the sample countries during the sample period was only about US $537 (or US $2,294 when adjusted for purchasing power parity), which is not very high. Therefore, it is possible that FDI flowing to this region is not "market seeking" in nature. Nonetheless, the model includes market size as a determinant of FDI and uses per capita real GDP (PPP adjusted) as a proxy for the domestic market size.

Human Capital: Although MNCs are often attracted to developing nations by the abundance of their cheap labor, the cost advantages can however be counterbalanced by their low labor productivity. Higher level of human capital is a good indicator of the availability of skilled workers, which, along with cheap labor, can significantly enhance the locational advantage of a host country. This study uses the natural log of life expectancy at birth as a proxy for the level of human capital.

Infrastructure: Availability and quality of roads,

highways, airports, seaports, electricity, telecommunication networks, etc. should increase productivity and thereby boost the locational advantage of a host country. This study uses the natural log of per capita electricity use (in kilowatt hours) as a proxy for the availability of infrastructure. In addition to availability, reliability of infrastructure (such as the frequency of power outage) could also be a crucial indicator of the overall quality of infrastructure, for which data is not readily available.

Return on Investment: Higher rate of return on investment should attract higher levels of foreign capital into a host country. However, due to the absence of well-developed capital markets in most developing countries, measuring the rate of return on investment is difficult. Several studies, such as Edwards (1990) and Jaspersen et al. (2000), have proposed a solution to this problem --the inverse of per capita income in natural log can be used as a proxy for the return on investment. The rationale is that return on investment should be positively correlated with the marginal product of capital, which should be high in capital-scarce poor countries where per capita income is low (or the inverse of per capita income is high). Therefore, the inverse of per capita income should be positively related to FDI inflow. This study uses the natural log of inverse of per capita real GDP as a proxy for return on investment.

Political Risk: A significant factor in the location decision of MNCs is political stability in the recipient countries. Since measuring political uncertainty is difficult, studies such as Edwards (1990) and Asiedu (2002) have either used events as strikes, political assassinations, and coups d'état, as proxy variables for political instability or have used them to construct indices of political instability. A number of studies, such as Alam and Quazi (2003) and Lensink et al. (2000) used dummy variables as proxies for political risk. This study also uses a dummy variable to capture political risk in the sample countries. The dummy variable takes the value of "1" in the following years: Bangladesh - 1996 and 2001 (general elections were preceded and followed by months of widespread violence and political unrest); India - 1999 (Kargil war with Pakistan); Pakistan - 1999 (Kargil war with India) and 2000 (political turmoil following the army coup staged by General Pervez Musharraf in late 1999); Sri Lanka – 1995-2001 (decade-long civil war ebbed with a truce signed in 2002).

Data, Methodology and Estimation

Data for FDI (annual FDI inflow as a percentage of GDP), per capita income, per capita use of electricity, and life expectancy at birth were collected from the *World Development Indicators* (World Bank 2006). The *World Development Indicators* calculates FDI inflows as "the sum of equity capital, reinvestment of earnings, and other short- and long-term capital as shown in the balance of payments" (p. 319). Data for economic freedom were collected from the *2006 Index of Economic Freedom* (Heritage Foundation 2006).

The panel regression model was estimated with the Generalized Least Squares (GLS) method. The panel data from four countries covered the 1995-2004 period, which produced a sample of 40 observations. The timeframe covered by the dataset (1995-2004) is determined by the availability of data. The *Economic Freedom* index is available only from 1995 and the *WDI CD-ROM 2006* reports annual FDI inflow until 2004.

The estimated GLS coefficients, presented in Table 4, reveal that among the explanatory variables incremental lagged changes in FDI, economic freedom, infrastructure, and political risk turned out statistically highly significant, while market size and human capital turned out marginally significant with the correct *a priori* signs. The overall diagnostic statistics appear satisfactory for each model. The White test for heteroscedasticity revealed signs of heteroscedasticity; therefore, the GLS model was estimated with heteroscedastic panels. It was assumed that the panels had common autocorrelation parameters. Finally, the Ramsey Regression Equation Specification Error Test (RESET) revealed that there was no evidence that the model had omitted variables.[3]

Two variables (market size and human capital) turned out marginally significant. As discussed before, the sample countries are rather poor (with average PPP per capita annual income of only US $2,294), which perhaps makes these markets somewhat unattractive for "market seeking" FDI. As for human capital, there is not a significant variation in life expectancy (the proxy variable for human capital) among the sample countries except for Sri Lanka. The average life expectancy during the sample period for the sample countries are as follows: Bangladesh - 61.2 years, India - 62.7 years, Pakistan - 62.8 years, and Sri Lanka - 73.5 years. Since the human capital variable did not significantly vary among three out of four countries, it failed to statistically explain the variation in the dependent variable (FDI inflow). Only one variable - return on investment - turned out statistically highly insignificant and was dropped

Table 4: Determinants of FDI in Sample Countries

Explanatory Variables	GLS Model		GLS Model	
	Coefficient	z stat	Coefficient	z stat
Intercept	-1.22	-0.58	-5.28	-0.87
ΔFDI_{t-1}	0.23	1.82*	0.22	1.71*
Economic Freedom	-0.55	-3.50**	-0.49	-2.51**
Political Risk	-0.19	-1.89*	-0.19	-1.82*
Infrastructure	0.19	1.75*	0.27	3.69**
Market Size	0.38	1.28	-	-
Human Capital	-	-	1.52	1.10
Diagnostic Statistics	Sample size = 40		Sample size = 40	
	Wald $\chi^2_5 = 65.63$ (P value = 0.00)		Wald $\chi^2_5 = 57.21$ (P value = 0.00)	
** 5% level of significance; * 10% level of significance				

Source: Authors' own estimates

from the model. As explained before, it is difficult to adequately capture return on investment with proxy variables. It is plausible that the variable used in this study for return on investment (natural log of inverse of per capita income) is a poor proxy.

The estimated results confirm the *a priori* hypothesis that while inward FDI is significantly boosted by incremental lagged changes in FDI and infrastructure, the inflow is significantly depressed by lack of economic freedom and political risk. Although these results are generally consistent with the FDI literature, the result that economic freedom (or the lack of it) is a significant determinant of FDI deserves further analysis. The FDI literature has not yet fully addressed the importance of economic freedom (or investment climate), as quantitative data on investment climate was generally lacking until the *Economic Freedom Index* became available in 1995. Therefore, it is important to adequately analyze the relationship between FDI and economic freedom.

As mentioned before, the *Economic Freedom Index* is constructed by incorporating 10 broad categories, which in turn are constructed by 50 independent variables. According to the methodologies discussed in *2006 Index of Economic Freedom* (Heritage Foundation 2006), each one of the 50 underlying variables is evaluated annually to reflect the institutional environment in each country. Based on the individual score of each underlying variable (which is not reported by the publication), the 10 disaggregated categories are graded on a scale of 1 to 5, where a lower score signifies policies conducive to economic freedom, and conversely a higher score signifies the contrary. Since this study found that lack of economic freedom significantly depresses FDI, it is rational to hypothesize that similar negative relationships should be found between the individual disaggregated categories of the index and FDI inflow (a higher score is reflective of worse policy setting, which should result in reduced FDI inflow). To test the hypothesis, a pair-wise correlation matrix was computed, which is presented next.

The correlation matrix presented in Table 5 reveals that the correlation coefficients between FDI inflow and 8 out of the 10 disaggregated categories have the correct *a priori* negative signs, all but one of which are statistically highly significant. As expected, FDI inflow is negatively correlated with restrictive trade policies, government control of the economy, restrictive foreign investment code, repressive financial system, price and wage controls, lax enforcement of property rights, excessive regulation, and restrictive informal market policies.

The correlation coefficient between FDI inflow and FDI policies (capital flows & foreign investment) turned out to be highly insignificant, which suggests that FDI inflows to the sample countries do not correlate highly with their official foreign investment policies (which comprise of restrictions on foreign ownership of business, repatriation of earnings, etc.). The EF scores for Bangladesh and Sri Lanka on the capital flows & foreign investment category

Table 5: Pair-wise Correlation between FDI and Categories of EF Index

Disaggregated Categories of EF Index	Correlation Coefficient with FDI	Significance of Coefficient
Trade Policy	-0.57	0.00**
Fiscal Burden of Government	0.20	0.21
Govt. Intervention in the Economy	-0.47	0.00**
Monetary Policy	0.32	0.04*
Capital Flows & Foreign Investment	-0.11	0.51
Banking and Finance	-0.45	0.00**
Wages and Prices	-0.54	0.00**
Property Rights	-0.52	0.00**
Regulation	-0.70	0.00**
Informal Market Activity	-0.63	0.00**
** 1% level of significance; * 5% level of significance		

Source: Authors' own estimates

remained stagnant during the sample period (coincidentally 3 for both countries in each year during 1995-2004), the score for Pakistan worsened since 2001 (2 during 1995-2000 and 3 during 2001-2004), and the score for India temporarily worsened during 1999-2001 (3 during 1995-1998, 4 during 1999-2001, and 3 during 2002-2004). Although these indicators registered very little changes during the sample period, these countries did receive sizeable influx of FDI at the same period (the average FDI/GDP ratio increased from 0.56 in 1995 to 0.97 in 2004 – Table 2). Evidently, these countries' success in attracting FDI did not result from changes in their official FDI policies, which suggests there is room for improvement for those policies.

Investment Climate - Foreign Firms' Perspectives:

This section analyzes the sample countries' investment climate from foreign firms' perspectives and attempts to identify factors that have created locational disadvantage for Bangladesh vis-à-vis the other three countries. The dataset used in this section is published by the Enterprise Analysis unit of the World Bank (*Enterprise Surveys* data), which captures over 150 business environment indicators, based on surveys of more than 58,000 firms in 91 countries. The number of firms surveyed in the *ES* dataset for the sample countries are as follows: Bangladesh - 1,001, India - 4,234, Pakistan - 965, and Sri Lanka - 452.

According to the Enterprise Surveys website, "The Enterprise Surveys capture business perceptions on the biggest obstacles to enterprise growth, the relative importance of various constraints to increasing employment and productivity, and the effects of a country's investment climate on its international competitiveness" (World Bank 2007). The World Bank employs private contractors, instead of agencies or institutions affiliated with local governments, to conduct the *ES* surveys, which ensures greatest degree of participation, and confidentiality and integrity of the data. Full details about the *Enterprise Surveys* methodology are available at the *ES* website (http://www.enterprisesurveys.org/Methodology/).

The survey is usually completed by the top-level management staff. The most important part of the survey is the core survey, which comprises manufacturing and service sector surveys. The core survey is organized into two parts - the first part seeks managers' opinions on the main constraints in the business environment, and the second part focuses on productivity measures. Although the data are presented for both domestic and foreign firms, this study uses data from only foreign firms.[4]

Table 6 below shows several factors – infrastructure, corruption, crime, and financial markets, where foreign firms located in Bangladesh have responded more unfavorably vis-à-vis foreign firms located in the other three countries. Table 7 however shows several factors where Bangladesh seems to have a locational advantage vis-à-vis those countries.

Compared with foreign firms located in the three rival countries (India, Pakistan and Sri Lanka), foreign firms located in Bangladesh have to rely more on electricity generated from their own

Table 6: Factors Creating Locational Disadvantages for Bangladesh

Poor Infrastructure	**Bangladesh**	**India**	**Pakistan**	**Sri Lanka**
Electricity from Generator (%)	21.47	17.04	9.00	14.16
Delay in Obtaining Electrical Connection (days)	50.28	14.09	32.91	58.38
Delay in Obtaining Mainline Telephone Connection (days)	74.95	6.93	18.40	44.40
% of Firms Identifying Electricity as a Major Constraint	82.97	7.32	38.89	45.98
% of Firms Identifying Transportation as a Major Constraint	36.17	12.20	5.56	28.74
Pervasive Corruption	**Bangladesh**	**India**	**Pakistan**	**Sri Lanka**
% of Firms Expected to Pay Informal Payment (to Get Things Done)	74.91	40.00	29.41	22.78
% of Firms Identifying Corruption as a Major Constraint	83.07	31.71	33.33	22.99
Crime and Disorder	**Bangladesh**	**India**	**Pakistan**	**Sri Lanka**
Losses Due to Theft, Robbery, Vandalism, and Arson Against the Firm (% of Sales)	1.21	0.10	0.01	0.44
% of Firms Identifying Crime, Theft and Disorder as Major Constraints	49.07	0.00	22.22	17.24
Underdeveloped Financial Markets	**Bangladesh**	**India**	**Pakistan**	**Sri Lanka**
% of Firms Using Banks to Finance Investments	14.50	29.27	11.11	18.39
Internal Finance for Investment (%)	79.81	70.86	60.62	64.87
Bank Finance for Investment (%)	18.69	22.59	4.38	21.15
Supplier Credit Financing (%)	0	1.38	9.38	2.19
Equity, Sale of Stock For Investment (%)	1.5	1.03	13.12	1.89
% of Firms Using Banks to Finance Expenses (Working Capital)	35.78	65.85	27.78	52.87
Working Capital Internal Financing (%)	77.00	52.24	71.56	38.26
Working Capital Bank Financing (%)	20.79	36.45	5.00	30.76
Loans Requiring Collateral (%)	93.00	62.50	72.73	87.80
Value of Collateral Needed for a Loan (% of the Loan Amount)	152.06	135.00	72.93	112.97
% of Firms Identifying Access/cost of Finance as a Major Constraint	17.25	19.51	5.56	14.94
Other Constraints	**Bangladesh**	**India**	**Pakistan**	**Sri Lanka**
% of Firms Identifying Tax Rates and Administration as a Major Constraint	40.02	24.39	44.44	13.79
% of Firms that Trade Identifying Customs & Trade Regulations as a Major Constraint	21.11	17.95	38.89	17.24
% of Firms Identifying Business Licensing and Permits as Major Constraint	45.27	10.00	5.56	2.30
% of Firms Identifying Labor Skill Level as a Major Constraint	67.57	7.50	5.56	18.39

Source: Enterprise Surveys (2007)

generators, face more delays in obtaining electrical connections (except Sri Lanka), and face more delays in obtaining mainline telephone connections. Furthermore, the percent of foreign firms identifying electricity and transportation as major business constraints is much higher in Bangladesh vis-à-vis the rival countries. These figures suggest that foreign firms perceive poor infrastructure to be a major hurdle for doing business in Bangladesh, which is consistent with results shown in Table 4 that

infrastructure is a significant determinant of inward FDI.

A staggering 83% of foreign firms located in Bangladesh identified corruption as a major constraint (nearly three times as high compared with the rival three countries). This is not surprising given that Bangladesh does hold the dubious distinction of one of the most corrupt countries in the world. The most recent *Corruption Perception Index* published by Transparency International (2008) ranked Bangladesh 162nd out of 179 countries (the rankings of the other three countries are as follows: India - 72, Pakistan - 138 and Sri Lanka - 94). Bangladesh made debut in the CPI list in 2001 at the bottom position as the most corrupt country in the world and remained in that position for five consecutive years until 2005. Foreign firms located in Bangladesh also identified crime and lack of law and order as major business constraints. Evidently, this negative image of Bangladesh as a corruption- and crime-riddled country is taking a toll on its FDI inflow.

Compared with foreign firms located in the rival countries (except Pakistan), foreign firms in Bangladesh generally rely more on their internal resources to finance investment and working capital, and rely less on the financial markets (banks, supplier credit, stock market, etc.). Foreign firms in Bangladesh also face problems in the forms of higher percentages of loans requiring collateral and higher value of collateral needed for loans. Evidently, access to efficient financial markets by foreign firms is lagging in Bangladesh vis-à-vis the rival countries. Furthermore, a higher percentage of foreign firms in Bangladesh (except in India where the percentage is somewhat higher) identified access/cost of finance as a major business constraint. These figures suggest that foreign firms perceive underdeveloped financial system to be a major hurdle for doing business in Bangladesh, which is consistent with results shown in Table 5 that there is a significant negative correlation between less efficient banking and finance system and FDI.

Finally, compared with foreign firms in the rival countries, a higher percentage of foreign firms located in Bangladesh identified tax rates and administration (except in Pakistan where the percentage is somewhat higher), customs and trade regulations (except higher in Pakistan), business licensing and permits, and labor skill level as major business constraints. These perceptions are consistent with results shown in Table 4 that human capital (a part of which is labor skill) is a determinant (albeit marginally significant) of FDI, and results shown in Table 5 that FDI is negatively correlated with repressive trade policy and regulatory requirements (such as licensing and permits).

Despite the presence of several factors identified above that are not conducive to attracting FDI, Bangladesh does possess some factors that are favorable to FDI. Table 7 below shows that, compared with foreign firms located in the three rival countries, foreign firms in Bangladesh spend a smaller share of senior management time in dealing with requirements of government regulation (except in Sri Lanka where the ratio is slightly smaller), attend fewer meetings with tax officials, utilize modern technology (web and e-mail) more extensively to communicate with clients/suppliers and do not view labor regulations as a major constraint.

Table 7: Factors Creating Location Specific Advantages for Bangladesh

Positive Factors	Bangladesh	India	Pakistan	Sri Lanka
Senior Management Time Spent in Dealing with Requirements of Government Regulation (%)	3.88	10.99	10.76	3.55
Average Number of Visits or Required Meetings with Tax Officials	2.18	6.32	5.35	8.66
% of Firms using the Web to Communicate with Clients/suppliers	85.22	74.36	55.56	48.28
% of Firms Using Email to Communicate with Clients/suppliers	100	95	77.78	95.4
% of Firms Identifying Labor Regulations as a Major Constraint	0	19.51	11.11	31.03

Source: Enterprise Surveys (2007)

Table 8: Selected Indicators of Global Competitiveness

Indicators	Bangladesh		India		Pakistan		Sri Lanka	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Overall Index	107	3.55	48	4.33	92	3.77	70	3.99
Financial Market Sophistication	75	4.09	37	4.93	65	4.32	63	4.39
Infrastructure	120	2.19	67	3.45	72	3.22	73	3.21
Higher Education and Training	126	2.47	55	4.13	116	2.72	77	3.77
Health and Primary Education	105	4.71	101	4.92	115	4.09	51	5.65

Source: Global Competitiveness Report (2008)

This section has identified several factors (such as infrastructure, corruption and crime, financial markets, etc.) where foreign firms have a more negative perception of Bangladesh vis-à-vis the other three countries. These results are generally consistent with the findings of the *Global Competitiveness Report* published by the World Economic Forum (2008). This report ranks 131 countries on a broad range of competitiveness indicators, some of which are reproduced in Table 8. These figures show that Bangladesh is ranked lower than the three countries in terms of overall index, financial market sophistication, infrastructure, education, training and health (except Pakistan is ranked lower in health and primary education). Therefore, findings from independent sources indicate that the locational disadvantage for Bangladesh in attracting FDI vis-à-vis the other countries in the region can be largely explained by poor infrastructure, underdeveloped financial markets, and inadequate human capital.

Policy Implications and Recommendations

Results presented in preceding sections support a set of policy recommendations. Given that corruption and the bureaucracy are big hurdles to attracting FDI into Bangladesh, policymakers must make it a priority to reduce corruption at all levels of the government, and improve the efficiency of the administration. Bureaucratic red tape must be reduced by privatizing and outsourcing as many FDI related processes as possible. In the sectors of the economy that have demonstrated a potential for a large multiplier effect (forward and backward linkages), such as pharmacy, commercial air travel, civil aviation, cargo airlines, machine tool industry, etc., foreign investors should be welcomed to invest either independently or jointly with local firms. In each case, technology and skill transfer will take place in the long run to benefit the national economy.

In a democracy there are always elements in the political spectrum who are adamantly opposed to liberalization of the investment climate to attract foreign investors. The analysis presented in this paper supports that foreign investors are sophisticated, and look for markets which are friendly to FDI for the long run security of their investments. The risk elements – political instability and conflict must be managed effectively. Bangladesh has long suffered from *hartals* or general strikes that have the effect of paralysis of large segments of the urban economy, creating uncertainties. This is particularly detrimental to exports since foreign orders are often bound by tight schedules. The prevalence (of general strikes) creates a poor investment climate, especially for foreign investments. The democratic process and respect for law and order are not incompatible. Freedom to speak and to protest should not be confused with disruptive behavior that negatively impacts work conditions and the national economy.

An important lesson from the experience of Eastern European nations during their transition from command economy to a market economy – a lesson reinforced by the results of this study - is that the legal system should be adequate so that property rights are enforced. Unless the court system functions well so that the factory owners are able to seek grievance and settle disputes regarding property right, the foreign money will shy away.

An educated and skilled labor force is the key to success for attracting foreign investors. Therefore, adequate investment in education should become high priority. Private universities have done well to create some competition for the public institutions that have been hopelessly mired in politics. Educational institutions must be provided in security and to the extent possible, protected from the forces of violence and instability.

Bangladesh can learn a valuable lesson from India and China where an important source of FDI has been their expatriate nationals. The numbers are especially impressive for China – according to experts a significant part of early FDI in China came from members of the Chinese Diaspora. The Chinese policymakers decided early on that citizenship is based on blood (or genes), not the place of birth. Smart and Hsu (2004) write, "The opening of China to the capitalist world after 1979 was done in a spatial sequence designed to mobilize the resources of the overseas Chinese, with the Special Economic Zones located in the key areas of migrant origins. Including the 'compatriots' (tongbao) of Hong Kong, Macao and Taiwan, the great majority of foreign direct investment in China has come from the Chinese diaspora. Local development patterns have been strongly affected by the extent, or lack, of emigrant connections."

The contribution of Non resident Indians to foreign direct investment in India are also impressive, though not nearly as large as for China given that the Indian policymakers until 2002 were not welcoming of their expatriate citizens. The lesson for Bangladeshi policymakers is to welcome the nonresident Bangladeshi (NRB) citizens, especially those interested in investment and business opportunities.

Conclusions

Since the early 1980s, developing countries across the world have embraced globalization and opened up to FDI. Among South Asian countries, India, Pakistan and Sri Lanka have witnessed impressive increases in their FDI inflows. The average ratio of FDI to GDP for Bangladesh is the lowest compared to these three countries, which suggests the economy of Bangladesh may suffer from some locational disadvantages in attracting FDI. For this sample of economies, this study econometrically estimates the determinants of inward FDI, examines the relationship between FDI and economic freedom, and analyzes the investment climate in each economy from the perspective of foreign investors to explain our results.

A panel regression model is estimated using 1995-2004 panel data from the sample countries. The estimated results suggest that FDI inflow is significantly boosted by foreign investors' increased familiarity with the host economy and better infrastructure, but is significantly depressed by lack of economic freedom and political risk. The FDI inflow is also moderately affected by market size and human capital. Further analyzing the relationship between FDI and components of the Economic Freedom Index, this study finds that FDI inflow is negatively correlated with restrictive trade policies, government control of the economy, restrictive foreign investment code, repressive financial system, price and wage controls, lax enforcement of property rights, excessive regulation, and restrictive informal market policies.

Utilizing the World Bank's *Enterprise Surveys* data, we analyze foreign firms' perspectives about the investment climate in each economy in our sample. The results reveal several hurdles – poor infrastructure, pervasive corruption, crime and disorder, underdeveloped financial markets, excessive regulations, and inadequate human capital, which may have created locational disadvantages for Bangladesh in attracting FDI vis-à-vis the other three countries in the sample.

This study adds to our knowledge of factors that drive the global flows of FDI. This information is important for policymakers and central banks for devising strategies to promote foreign investment and economic development. Given the intense global competition for these investment funds, there is much at stake not only for Bangladesh and South Asia, but also for developing countries as a whole.

Endnotes

1. Citations for these studies can be found in Moosa (2002).

2. Citations for these studies can be found in Moosa (2002).

3. Estimation details are available from authors.

4. The full *ES* questionnaire is stored at: http://www.enterprisesurveys.org/documents/Questionnaire_note_January_2007.pdf

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Rahim Quazi
Associate Professor of Economics
College of Business
Prairie View A & M University
rmquazi@pvamu.edu

Munir Quddus
Professor of Economics and Dean
College of Business
Prairie View A & M University
muquddus@pvamu.edu

NGOs, Clientelism and the Makings of Social Change

Joe Devine

Abstract

NGOs in Bangladesh are a unique phenomenon globally, and both academics and practitioners have spent considerable time trying to grasp their significance and role. To a great extent our analysis and understanding of NGOs have relied on formal reports, evaluations and documentation of different NGO activities. This article offers a different perspective. It attempts to understand the 'real world of NGOs' and argues that their deeper significance is to be found in the many informal and everyday practices of the social actors that operate in and around the NGOs. These informal practices usually go unnoticed by observers and are rarely reported in official documents. Drawing primarily on the experience of a national NGO, the article focuses on three areas where informal practices and decisions are evident: political mobilization, brokering skills and opening up new livelihood opportunities. The analysis of these practices reveals that the success of the NGO relies as much on its capacity to negotiate or manage these informal arenas as it does on its more formal 'development activities'. There is no shortage of NGO writings in Bangladesh and yet what we know of these organizations is still considerably less than what we do not know. This article points to new lines of enquiry that will help us understand their real and ongoing significance in Bangladesh and globally.

Introduction

There is a growing sense that some of the enthusiasm for NGOs that was so palpable throughout the 1980s and 1990s, has begun to wane (Lewis 2005). This of course was entirely predictable for two interrelated reasons. First, the meteoric rise of NGOs on the development scene was a direct response to ideological shifts taking place in the West, in particular the growing influence of neo-liberal analysis within the development industry. The close link between NGOs and donor preferences meant inevitably that changes to the latter would have immediate implications for NGOs. Second, the support given to NGOs over the past twenty years was fuelled by hugely overstretched expectations about the potential of NGOs to deliver key services to the poor, or to facilitate processes of change that would radically alter the distribution of power in society. That view has now been thankfully tempered and while NGOs have been relieved of the burden of over-inflated expectations, they have also in the process lost a significant part of their 'flavor of the month' status.

Notwithstanding the above scenario, I would argue with Lewis (2005) that now is a particularly propitious time to write on NGOs precisely because it is becoming more possible to reflect and research on these organizations in a way that is less tied up

with donor imperatives and needs. There is no shortage of NGO writings in Bangladesh and yet it remains true that what we know of these organizations is still considerably less than what we do not know. This chapter seeks to contribute to our knowledge of NGOs in Bangladesh by focussing on practices and processes that have been largely ignored or overlooked in the literature. The premise of my argument is quite straightforward. NGOs are dynamic organizations whose activities are mostly sustained by a range of informal processes or 'scattered practices' (de Certeau 1984:48) that take place on a routine basis. These practices usually go unnoticed by observers (at times because they are deliberately hidden) and are therefore not considered in formal presentations or evaluations of NGO activities. Crucially however the same practices play a primary role in determining the success or otherwise of NGOs. This informal realm therefore is an important but often hidden dimension of what Hilhorst (2003) calls the 'real world of NGOs', and is, I would contend, pivotal to understanding the real significance of NGOs in Bangladesh. This is an argument that is broadly familiar, even if under-researched, to political scientists for as James Scott has noted elsewhere, all formal order "is always and to some considerable degree parasitic on informal processes, which the formal scheme does not recognize, without which it could not exist, and which it alone cannot create or maintain (Scott 1998:312).

In developing my analysis I will refer mostly to research I carried out with members and staff of a national NGO called Shammo.[1] This is supplemented by my observations and reflections that have emerged from other commissioned

research into NGOs and civil society in Bangladesh over the last decade or so. My relationship with Shammo has evolved over a long time and my relationship with staff and members extends well beyond the boundaries that are normally associated with research or consultancy engagements. As such I have been privileged to observe and discuss the informal and everyday practices that the organization has had to undertake in order to survive and take forward its agenda. I would of course like to take the credit for having secured such a privileged position, but the truth is that both members and staff have been responsible for opening up this particular focus and sensitizing me to its implications. Often while carrying out my research at Shammo, my attempt to question or probe specific events, cases or outcomes was often met with the following phrase: 'golper bhittore onek golpo ache' (inside every story there are many other stories). I learned to treat this as an indigenous expression that confirmed the significance attached by Scott to the informal processes underpinning formal schemes - the 'immediate story' therefore can only be understood if the smaller stories, often hidden, are properly understood.

This article is organized in five main sections. First I will give a brief overview of Shammo and its work. This will be followed by three sections, each of which identifies and then reflects on a key area that contributes to Shammo's overall success. The final section will offer some general observations, derived from the three preceding sections, on the need to pay greater attention to the informal practices that underpin NGO actions.

A Brief History of Shammo

Shammo began its life in the mid-1970s as a local youth club established primarily to promote recreational and cultural activities for its own members. Like many other initiatives in Bangladesh at that time, the youth club also carried out some modest relief and welfare activities. Impressed by the enthusiasm of the youth, the headmaster of the local high school put the leaders in contact with one of his acquaintances who also worked for Oxfam. The Oxfam worker visited the young people over a period of time and encouraged them to register as an NGO and focus more on development activities. He also arranged for the leaders to attend development training sessions run by other NGOs and development practitioners. These meetings introduced the leaders to a suite of ideas, generally associated with the Freirean notion of 'conscientization', which placed a strong emphasis on the need to understand, identify and confront the structural causes of poverty (Freire 1972). The language and analysis of these meetings resonated powerfully with Shammo's local context where the immediate issue that concerned most of the poorest households was land ownership and security.

Close to the office of Shammo lies an area of over 820 acres known in Bangla as khas land. This particular type of land refers to unoccupied land that is legally owned by the Government and managed by the Ministry of Land. Since the early 1970s, successive governments have committed to redistribute such land among landless households.[2] Although the area of khas land close to Shammo's office was officially allotted to landless households back in 1972, the beneficiaries never managed to take possession of what was theirs by right. Instead local elites illegally occupied the land and then used their political connections to protect themselves, and effectively 'legitimize' their actions. Subsequently they forced the landless households to work as day laborers on the land under conditions that further favored the elites. The ability of elites to act in such a way relied on two factors. First, they took advantage of their position in the wider political context (Grindle and Thomas 1991) that brought actors at national and local levels together in collusion in order to retain de facto if not always de jure control over key assets and resources. This was an important aspect of an overall strategy of power accumulation. As Hossain and Jones note:

> National politicians and bureaucrats are often themselves large landowners and even if they are not, they depend on rich peasants both for political support and to ensure that the countryside remains reasonably tranquil. To attack the interests of this dominant class would be political suicide for any of the political parties (Hossain and Jones 1989: 180).

The second factor refers to the dynamics involved in seeking to achieve a secure livelihood. All of the landless households who officially received an allocation of khas land also depended on the benevolence of the elites for their everyday subsistence and security. The nature of the relationship between elites and the landless is best described as one between patron and client, in which the latter is expected to demonstrate loyalty in order

to have a chance (but never claim as a right) of securing benefits from the former. Inherent to the relationship therefore is an internalized mechanism that depresses the possibility of rebellion or resistance. This explains why the landless poor in villages near Shammo never mobilized to exercise their right to own and use the khas land. Such an act would have been interpreted as a sign of disloyalty by respective patrons and would have jeopardized, perhaps irreversibly, any chance of future benefits or favors from them. The fear of this happening was so strong that the landless households effectively complied with the behavior and wishes of the elites. Rather than unite among themselves, landless households ended up competing among themselves in order to prove their loyalty and strengthen their claims on the few employment opportunities that arose – jobs as day labourers on the very land that was theirs by right.

The above context also helps explain why so many of the first Shammo samities (small groups of members) focused on khas distribution and land rights in general. When set with the task of translating the Freirean goal of identifying and confronting the structural causes of poverty, samity members pointed to the fact that the elite continually held the landless in oppressive conditions that weakened their livelihood options. The misappropriation of khas land symbolized this in a very concrete way. As the Freirean inspired analysis deepened and the membership base of the samities increased, the khas land area became a focus and site of struggle between the elites and Shammo's members.

It is not possible to go into the details of the khas land struggle here.[3] Suffice to say that by the early 1990s, all the khas land near Shammo's office had been re-distributed among landless households, and the ability of the elites to repossess the land had been effectively quashed. In the meantime Shammo's reputation grew and communities of landless poor from other areas in the country began asking Shammo to establish samities in their localities. Shammo's reputation as a rights-based organization coincided with a period of NGO growth in Bangladesh in which many organizations began to shift their focus away from social mobilization generally and land-based struggles in particular (Devine 2003). This shift, as Rahman (2006) rightly argues, reflected not only new organizational priorities but also the influence of the wider political context that was growing more inimical to protracted NGO-led social mobilization. By the early 1990s therefore Shammo had found a niche in the development market and over time its name became almost synonymous with khas land struggles. On the one hand, this reputation allowed Shammo to increase its membership base. On the other hand, it encouraged the organization to build on its expertise in collective action, advocacy and mobilization and diversify its activities. Shammo therefore branched out and initiated new social mobilization programmes in democratization and women's empowerment.

On many fronts, Shammo is an organizational success. It has successfully supported landless households to repossess khas land that had been misappropriated by elites, and has also nurtured a spirit of solidarity among its members that enables them to protect themselves against elite attacks and plot out new livelihood strategies. But how has this success come about? And what factors have played an influential role in the success story of Shammo? In the following sections, I attempt to respond to these questions by exploring the three key areas of action and engagement that underpin the success of Shammo: political mobilization, brokering skills, and opening up new livelihood opportunities.

Political mobilization

The importance of solidarity to effect social change is a theme the NGO literature has been eager to highlight. Uphoff et al. (1998) for example argued that one of the most important criteria of NGO success is the ability to create and sustain a unified and loyal membership. Teasingly, they go on to state that the ability to create effective solidarities "can, in some respects, be even more important than money" (Uphoff et al 1998:180). The need for effective solidarities is justified on the grounds that it represents the kind of new politics (Cornwall and Coehlo 2007) required for the poor or disenfranchised to better pursue their own interests. In other words, solidarity, collective action and political empowerment are understood as central to the process of helping poor people move from being a 'class in itself' to a 'class for itself'. This is an inherently political process.

The importance of increasing membership and nurturing a group that can be mobilized is something that is not lost to NGO activists in Bangladesh. In fact NGO leaders often point to membership size and mobilization capacity as indicators of organizational success. The accusation

that an organization has few members (tader kono lok ney) or that its members are deserting the organization, has powerful damaging effects. It is perhaps an irony but nevertheless very indicative, that while development NGOs publicly talk of solidarity and unity, they have for many years been more concerned about membership turf wars and the dangers of members belonging to more than one NGO (Fernando 1997). Rather like Sahlins' (1963) caricature of big men in Melanesia, the ability of NGO leaders to command a large, loyal and personal membership base is foundational to their individual and organizational reputation and status. It also carries very direct material consequences because membership size is often used to legitimize NGO claims on external resources and services. The success of NGOs therefore builds on the organizational ability to recruit, mobilize and ultimately command the loyalty of members. The following case study helps illustrate the points raised here.

In the late 1980s, the leader of Shammo was instrumental in setting up the first major NGO network in the District where Shammo operated. The network, called the Community Development Programme (CDP), was one of six district-based networks established throughout the country. The leader of Shammo was appointed the first coordinator of the new network, a position he secured because he was the main link and managed the relationships between the NGOs locally and the network leaders located in Dhaka the capital city. For the leader of Shammo, the network initiative offered an important opportunity to secure funds for his organization but also to consolidate his leadership among the local NGOs. In return for securing much needed contracts and funds via the network, the leader of Shammo expected, perhaps not always explicitly, the support and loyalty of the other NGOs. However shortly after establishing the local network, two of the network leaders in Dhaka became involved in a very public and personalized row, and as a result one of them was forced to resign. The person who resigned was a very close friend and supporter of Shammo's leader. Although the other members of the local District based CDP considered the whole affair a personal matter and wanted to ignore it, the leader of Shammo was caught between two loyalties. In the end he decided to ally himself with the network leader who had resigned and informed the other local NGOs that he would no longer take part in the CDP. He then asked the NGO leaders to follow his lead and withdraw from the network. In effect, he was asking the other local NGO leaders to reposition their loyalties around him just as he had done with the network leader who had resigned. While some of the smaller NGOs followed Shammo, the majority including the more established NGOs refused to do so. For the latter group, the CDP was an important or primary source of funds and they were not prepared to give this up for the sake of a personal feud. Refusing to abandon the CDP, the NGO leaders accused the leader of Shammo of being too bossy (matobbori kora) and of trying to impose his will on everyone else. The 20 or so local NGOs that worked together under CDP were therefore split into two groups: those 'for' and those 'against' the leader of Shammo.

Not long after resigning from the CDP, the leader of Shammo set up another NGO network and again through his contacts in Dhaka, managed to secure core funding for the network. He invited local NGOs to join but warned them that they could not be members of the new network and CDP at the same time. The tactic was deliberate and provocative. He 'talked up' the new network claiming that it would be more effective in serving the poor, and began to accuse the CDP of being insignificant and of even cheating the poor. The two NGO networks therefore became rival organizations and the main difference between the two was that Shammo's leader had greater and more reliable contacts with key external actors such as politicians, bureaucrats and of course donors. The CDP meanwhile depended on one main contact in Dhaka who had a limited amount of funds to distribute and had very weak personal connections with the network NGOs. Aware of this difference, local NGOs started to shift their allegiances, some very begrudgingly, to the new network established by the leader of Shammo. CDP meanwhile gradually became a network with no members even before its program of activities had been completed.

The story of the CDP is a good illustration of a key ingredient to NGO success in Bangladesh. Like political organizations more generally, NGOs need to be able to show that they have an established and faithful constituency. Having your own people upon whom you can count therefore is a prerequisite to success. While I have illustrated the general point with reference to alliance building between NGOs, the same principle lies at the heart of Shammo's relationship with its members. The organization therefore places great emphasis on members'

solidarity and expects their loyalty and allegiance. The importance attached to solidarity is justified partly because it is an efficient way for poor people to deal with everyday tasks and problems. Thus members turn primarily to the samity or the organization to resolve a range of problems including borrowing money, helping each other out in terms of need, resolving disputes within or between families and so forth. By dealing with these everyday problems within the group, members are not forced to seek the same help from external sources who may impose unequal or unjust demands. In its formal presentations, Shammo is keen to highlight the high level of interaction, the significant amount of mutual help and the depth of solidarity that exist among its samity members. While there is no doubt that the exchanges of reciprocal help are important and have very material implications, they also carry significant symbolic value. Having a unified group that can be mobilized collectively magnifies the importance of the organization and enhances its overall reputation and status. The greater the organization's renown, the more it expects its claims to be heard and its demands met. In this light, Shammo is not only concerned about extending its own membership base but also about retaining its role as the leader or main reference point for all NGOs operating locally. The struggle to be successful on both counts, as the CDP case illustrates, can be ruthless.

Does the above account have any relevance beyond the Shammo context? I would like to suggest that the logic of building alliances around individual personalities is a central characteristic of NGOs in Bangladesh. It is evident for example if we look briefly at the events that led to the break up of the Association of Development Agencies in Bangladesh (ADAB), the umbrella organization that had for years acted as a national coordinating body for NGOs in the country. The main catalyst to the break-up was a basic disagreement among a few of the country's top NGO leaders about if and how to engage with the main political parties during the 2001 national elections. The fall out from the disagreement was radical and member NGOs were soon forced to reposition themselves around the NGO leaders who were in dispute. As a result of this, the large majority of ADAB members decided to leave the association and create an alternative (and rival) NGO umbrella organization known as the New Federation of NGOs in Bangladesh.[4] This was a split not born of ideology but of broken personal relationships and competing loyalties. The fragmentation of ADAB is however not an isolated incident. During the time of the parliamentary elections of 1991 and 1996, the NGO sector again experienced intense internal struggles that resulted in shifts in the balance of power and leadership within the NGO sector (Devine 1999). In all the cases, the shifts were driven by individual personalities locked in rivalry, and became a crucial mechanism for resolving wider struggles for power both within and outside of the NGO community. From this perspective the CDP story acts as a useful microcosm to understand patterns that can be found more generally.

Brokering skills

NGOs play a crucial role acting as conduits through which resources, goods and services are channelled, and demands and claims are advanced. The scale of resources involved is vast. Bangladesh receives about US$2 billion dollars annually in foreign aid and around 15 percent of this is channelled directly though NGOs (Stiles 2002). Furthermore it is estimated that there are over 22,000 NGOs working in Bangladesh and that approximately 35 percent of the country's population directly benefit from NGO services (Devine 2003). NGOs therefore offer access to significant amounts of material benefits. In the case of Shammo and its members, the organization's ability to channel resources is directly linked to the role it plays in relation to the formal process of khas land identification and distribution. Over the years, Shammo has manoeuvred itself into a privileged position from which it can exert direct influence, formally and informally, on the process that determines the allocation of khas resources. In order to understand the positional power (Knoke 1990:10) Shammo enjoys, it is important to look at its relation to the wider polity as well as to its members and non-members.

In 1987 the Government introduced a flagship initiative called the Land Reforms Action Programme. One of the peculiar aspects of this program was that although managed by the Ministry of Land, it was effectively run by a committee made up mostly of NGOs committed at that time to land reform (Devine 2002). This arrangement effectively allowed NGOs unprecedented access to the higher echelons of one of the Government's key Ministries. In order to implement the national programme, committees were set up at District and Thana levels, and again NGO representatives were allocated a

formal position on the committees. Shammo was closely involved in establishing these arrangements and was amongst the first to take up the opportunity to sit on the local committees charged with identifying beneficiaries and ensuring the implementation of the programme. Given that their participation on the committees had the approval of the Ministry, it was an important strategic opportunity to outmanoeuvre local elites still looking to take control of the khas land (Devine 2002). Thus if the organization found out that the local administration was bowing to elite pressure or that the khas land had been misappropriated by elites, it would register its concern with the national committee and lobby for some form of top-down intervention or support. The leader of Shammo was involved in the work of the national committee thus creating a very strong strategic loop that strengthened Shammo's position locally. In effect by participating in the formal committees, Shammo began to establish a network of contacts and connections that outweighed and offered stronger leverage than the networks available to the local elites. This experience was a pivotal one that has become part of Shammo's routine strategic thinking. If the organization is asked to help landless communities in their fight over khas resources, it will undertake an informal risk assessment in which it estimates the strength of its own contacts and networks vis a vis those of potential rivals. For Shammo, the support of high-raking political and administrative 'friends' is a valued and protected asset. Contrary to a lot of the NGO literature, NGOs like Shammo have little interest in positioning themselves autonomously from the State. Indeed they spend considerable time and energy nurturing very personal and exclusive connections and linkages with the 'right' kind of State actors because these connections are pivotal to the organization's ability to operate (Houtzager 2003).

There are two immediate and important outcomes that result directly from Shammo's active participation in the committees that oversee the distribution of khas resources. The first is that those allocated khas land by committees where Shammo is a member, are indeed poor and landless. This is a formal and legal requirement of the program and Shammo uses its position to ensure that this basic rule is not transgressed. The fact that key resources are being handed over to the poor as opposed to being misappropriated by elites is an important development achievement that must not be overlooked or downplayed, especially in a political context in which the opportunities for the poor to negotiate policy change are hostile, alienating and frightening (Wood 2003, Rahman 2006). The second outcome is less obvious but revealing. When we look at those who receive khas land from committees where Shammo is a member, we see that the vast majority of beneficiaries also happen to be members of Shammo itself. This of course is not a formal requirement of the programme. While therefore being poor is a formal necessary requirement to receive khas resources, it is not a sufficient one. Being connected to those controlling access to resources (in this case to Shammo) helps differentiate potential beneficiaries, strengthening the claims of some (members of Shammo) over others (non-members).

The two different outcomes stand in some tension to each other. On the one hand, the delivery of services and goods to poor people is a positive development outcome and Shammo presents its work to the outside world in a way that highlights its ability to produce such pro-poor outcomes. These are also the outcomes that are discussed and used in the many formal evaluations of Shammo that have taken place over the years. On the other hand, Shammo also informally exercises significant discretionary influence in the final allocation of khas resources and this results in more particularistic and even exclusionary outcomes. Needless to say the management of this tension is a complex proposition. So how does this more discretionary influence work? And why is it necessary? First of all, the leaders of Shammo need to be seen as capable of delivering goods to their members. If they cannot deliver, they risk losing their members to other organizations and, as mentioned above, this would damage their overall reputation. In this light, the process of allocating khas resources is a crucial means through which the organization addresses its members' expectations and needs. However the amount of khas resources available is limited and cannot keep up with demand. In this case, Shammo has to find other benefits to distribute such as relief goods, technical and financial services, educational support and so forth. In some way, it has to be seen as responding to its members' needs. On some occasions, all the organization can offer is the hope of a more secure life in the future (Devine 2007). Whether material or symbolic, however, the expectation of receiving benefits is inherent to the member-organization relationship. The leaders of Shammo therefore present its work to its members (and potential members) in a way that highlights

their ability and intention to look after them.

Opening up livelihood opportunities

One of the convictions held by most NGOs is that at some point in the future their members or beneficiaries will be able to 'stand on their own feet', or 'protect their own rights' or 'look after themselves'. NGOs are therefore keen to show how their interventions contribute to a process in which poor members or beneficiaries take greater control of their lives and at the same time the need for NGO support diminishes. Thus if we take as an example the issue of micro-credit, NGOs demonstrate their success by reporting not only on the amount of loans disbursed but also on the effectiveness of these loans, evidenced in the establishment of a 'saving culture' amongst members or in the development of business ventures, and so forth. It is the latter body of evidence that indicates longer-term and sustainable impact in the lives of poor people because it heralds a future in which the poor are not dependent on external (NGO of otherwise) intervention. A similar logic can be found in Shammo where staff emphasize how the struggle over khas land is but a first step in a longer process that will result in its members being able to live their lives securely and without the need for organizational support. Recent successes in electoral mobilization are used to illustrate this point.

Being an NGO with a significant membership base, Shammo has always attracted the attention of electoral candidates (national and local) looking for votes and support. In the early days of the organization, members entered into negotiations with candidates hoping to secure their support in the fight against local elites over the khas land. Perhaps not surprisingly, pre-election promises made by candidates were ignored almost as soon as the elections were over and in some post-election situations, members found themselves to be the targets of political backlashes orchestrated by the very people they had voted into power. This was a fragile period in Shammo's history in which any gains secured through tactical negotiation were fleeting, unreliable and difficult to consolidate. However as the organization grew in numbers and strengthened its position, the dynamics of electoral engagement also changed. A key turning point occurred during the parliamentary elections of 1996 when members of Shammo participated in a nationwide NGO-led campaign that had a very direct impact on the electoral outcome (Devine 2006). In line with many other NGOs throughout the country, members of Shammo took the decision to act collectively and deliver a united vote. As a result of their efforts and mobilization, the incumbent Member of Parliament (an old adversary of Shammo) was elected out of office and replaced by a candidate who had responded favorably and publicly to the members' demands.[5] The sense of political purpose that was energized during the parliamentary elections was activated again during the 1997 local elections where for the first time, a significant number of Shammo's members stood as candidates. Of the 52 candidates from Shammo, 43 were successfully elected – an impressive rate of return that contrasts starkly with the more common experience in Bangladesh where NGO members stood for election but failed to win seats (Hassan 1999).

While Shammo as a development organization has had to guard against being accused of 'interfering in politics', for its members it is precisely the ability to 'interfere in politics' that demonstrates their collective power. The decision to engage with and mobilize directly in the political realm is based on the fact that elected officials and bodies hold the key to a range of public goods and services that, like khas land, should be made available to the poor but are often misappropriated by elites. Being in a position from which they can either control or influence the use of these goods and services could therefore significantly broaden the livelihood options of the members. Importantly this strategy opens up new avenues that are not directly managed by Shammo or its staff – a point that was not lost to the executive director of Shammo who in commenting on the 1997 electoral success of his members remarked,

> "We make sure that khas land is distributed correctly. At the thana our members can access many more services and they are entitled to do this because they are citizens. They shouldn't need Shammo's help for this".

While Shammo's sense of collective purpose and solidarity reached high points in both the 1996 parliamentary elections and the subsequent 1997 local elections, it is perhaps ironic that the same episodes triggered off a very public and deeply divisive confrontation involving both members and staff. When Shammo members decided to adopt a

collective stance in the 1996 parliamentary elections, one of the most vocal dissenters was the Chairman of Shammo who had been a member from the very early years and was held in high esteem by members and non-members alike. His decision not to back the mobilization strategy was based on the fact that his political affiliations lay in the party that Shammo members had decided not to support. Later, he nuanced his position by arguing that the nationwide NGO-led election campaign was little more than a form of political clientelism that encouraged the passive compliance and subordination of NGO members. In his view, NGO leaders sitting in Dhaka had made a pact with the opposition party and expected their members throughout the country to blindly follow their decision. On one occasion he commented to me that 'they [NGOs] teach us to shout slogans about our right to vote as we like but they also whisper to us about who they think we should vote.[6] The Chairman let it be known publicly that he would not follow the collective decision, and encouraged other members to vote as they saw fit and without fear. This caused an immediate split with staff and senior members of the organization, and soon he was being accused of disloyalty, abusing his position and being involved in corrupt dealings with local elites. Eventually he was forced to relinquish his position as Chairman and this kicked off a rapid process leading to his complete isolation. By the end of the parliamentary elections his party lost and the reputation of the ex-Chairman had been irretrievably damaged. The minority that had followed his advice also shared his fall from grace and in the process, forfeited any chance of accessing goods and services brokered by the organization. In analyzing the polemic that led to his ostracism, the ex-Chairman offered the following reflection.

> "All the landless must listen to and follow what [the leader of Shammo] says. If they do not, they will be thrown out of the organisation like I was or they will never receive the benefits he can provide. The poor depend on NGOs and the NGOs make good use of that dependence. If the […] members could build the same contacts as [the leader of Shammo], he would not be that happy. If members of NGOs could become economically self-sufficient and left their organisations, do you think the NGOs would be happy? Of course they would not be. NGOs need the poor to be […] members, more than they need them to be free and to stand on their own feet".

Prior to the 1996 parliamentary elections, Shammo's members had already targeted the 1997 local elections and they harbored an ambition not only to have landless members elected as ordinary members of the local council but to also have a member of Shammo returned as the chairman of the local council. This would have effectively allowed the landless control over the local council, and by implication, significant control over valuable services and goods. However the only candidate with the political skills and the reputation to attract votes from members and non-members alike was the ex-Chairman of Shammo. His decision not to support the collective strategy in the 1996 parliamentary elections put an end to any serious hope of him becoming chairman of the local council. When I first visited Shammo, the issue that was talked about most was the ex-Chairman's potential candidacy. While members were almost unanimous in their judgment that the ex-Chairman had committed a serious error of judgment during the parliamentary elections, many were also of the view that 'if Shammo's leaders wanted, he could still become chairman of the council'. In the end, he never became chairman (indeed his campaign turned out to be a complete disaster) because he failed to secure the endorsement of the organization's leaders and as a consequence the support of its members. Although many of the members acknowledged the personal qualities of the ex-Chairman, they also knew that disloyalty to the organization brought with it very grave livelihood risks.

The power of the informal – some concluding thoughts

The work of Shammo, like that of many other NGOs in Bangladesh, has been analyzed in various internal and external evaluations and reports. These documents present a very consistent picture of a successful organization committed to a rights-based agenda, delivering tangible and non-tangible benefits to its members, and promoting wider systemic change. There is therefore no shortage of documents demonstrating the success of Shammo, and the analysis presented here confirms this overall assessment. However in order to understand Shammo's success, it is important to ask how that success is produced and maintained.

This article identifies three key components of Shammo's overall success. It then illustrates how each of these components is underpinned by routine actions and decisions that are much more informal and usually exercised 'backstage' (Goffman 1959) or at least, out of view. The use of the word 'underpinned' is deliberate because it implies not only the co-existence of formal and informal practices, but also their interdependence. To paraphrase James Scott, the former simply cannot exist without the latter. The immediate implication of this is that if we want to talk sensibly of NGO success or failure, we need to pay far more attention to the latter. Part of the difficulty with this kind of statement is that the world of informal practices is wrought with ambiguity, contradictions, trade-offs, contingencies, and competing logics. It is a world that sits cumbersomely with the logic, often applied to NGO activity, that looks for neat, linear and logically sequential fits between means and ends, causes and effects, inputs and outputs. For many this is hardly a new observation and only serves to confirm the obvious point that 'reality is messier and more complex than our analysis'. This in my view however is a lazy conclusion. We need instead to think differently about how we research and understand organizations like NGOs. Dorothea Hilhorst (2003) argues that in order to understand the real world of NGOs we need to consider them less as things and more as process, an invitation that requires us to shift our attention "away from organizational features, structures and reports to the everyday practices of the social actors in and around the organization" (Hilhorst 2003:5). I concur with this completely adding that the everyday practices Hilhorst refers to, are often informal and sometimes even secret.

My account of Shammo throws up a range of informal but routine practices and relationships that strongly influence the organization's actions. These include acts of brokerage, preferential treatment, a demand for loyalty, exclusionary tactics and so forth. This raises an interesting paradox: the success of organizations like Shammo which are formally committed to rights-based agendas that privilege the praxis of entitlement, actually relies significantly on a range of informal practices that are more commonly associated with the logic of clientelism, factionalism and brokerage (Roniger and Gunus-Ayata 1994). For many this 'paradox' will appear as a profound and irreconcilable contradiction because the practice of clientelism is essentially a form of social control and domination, and as such runs completely counter to the core tenets and raison d'etre of NGOs and indeed development interventions. It is not surprising therefore to find that the literature on clientelism in Bangladesh, written mostly from a development lens, focuses on its negative dimensions.7 Thus Blair (2005) considers clientelism insidious because it a) thrives on and reinforces profound inequality between stronger patrons and weaker clients; b) encourages the corrupt use of public goods and funds; c) frustrates therefore the efficient use of public funds; and d) stunts people's ability to exercise voice.

Elsewhere and in relation to my analysis of Shammo (Devine 2003, 2006, 2007) I have tried to take the discussion of clientelism in a slightly different direction. In part this arose from a frustration with the way the literature tended to discuss clientelism in prefabricated, abstract and reductionist ways. What seemed to me to be missing was rigorous and empirically grounded analyses of the logic and detailed mechanisms through which clientelist forms in Bangladesh continue to reproduce themselves. I began to see clientelism less as a frozen and static relationship and more as the outcome of interactions that are continuously negotiated, confirmed or rejected, nurtured and indeed cared for. These were the kind of interactions that I observed taking place on a routine basis while carrying out research on Shammo and its members.

The clientelist forms that emerge from the interactions involving Shammo and its members are best understood in the context of the dynamics of social exchange that constitute the primary terrain upon which people construct their livelihoods in Bangladesh. For poor people, the ability to call upon and make effective use of the right kind of relationships, alliances or networks is fundamental in their struggle to maintain or improve their wellbeing. Those therefore with weak or unreliable relationships find themselves in particularly vulnerable positions. This of course is captured very well in the distinction people in Bangladesh make between amar keu ache (I have someone) and amar keu ney (I have no-one), with the latter being used to denote a more profound sense of helplessness, risk and vulnerability (Devine 1999). What matters most for clients therefore is that the relationships they have, are able to satisfy their need to be cared for and recognized. In this sense, clientelism is not as instrumental as the literature would have us

believe. Instead it is an inherently moral relationship (McGregor 1989) that works well because it "locks into a sense of belonging and identity, which reaches deep into the struggles of daily life" (Taylor 2004:224). This, I would argue, is a more accurate depiction of the relationships that are reproduced between Shammo and its members. Of course members are aware of the domination, inequality and control that exist and are reproduced through their interactions (clientelist) with the organization and its leaders. However this is not the way they normally refer to the relationship. Instead members are more likely to use expressions such as 'friendship', 'service', 'care' and 'love' when describing the actions and behavior of the leaders. This not only acknowledges the work Shammo has done for its members in the past, but it continues to nurture and service the relationship in a way that is deeply personalized and allows for future claims and exchanges. The kind of relationship Shammo offers, even if it is dominating, is always considered worth keeping.

What prospects therefore are there for structural change in this context? It is obviously difficult to give an unambiguous positive response to the question given that all forms of clientelism carry with them forms of domination and control. At the end of this article however I want to raise two points that might help us address the question in a more informed manner. First, the analysis presented here highlights the ongoing importance of clientelist networks for poor people seeking to gain access to services and goods and thus strengthen their livelihood options. Beyond stereotypes and abstractions, our knowledge of the everyday intricacies of cleintelism in Bangladesh remains quite poor. The scope of clientelism is not as comprehensive or static as the literature suggests and the poor are not waiting passively at the 'beg and call' of patrons. Poor people are involved in a much more heterogeneous structure of support networks and we need to know more about how these different networks operate and affect each other. We also need to know more about how development driven interventions operate in this heterogeneous milieu. Second, mainstream development discourse considers the enhancement of individual qualities such as autonomy, self-improvement, self-determination and personal choice as the primary means to secure improved quality of life and to facilitate longer-term structural change. Perhaps we need to examine more closely the appropriateness of this discourse and its implications for development interventions. The analysis of this chapter suggests that, for poor people in Bangladesh, life improvements come about not through autonomy but through relationships with the right kind of people who can access resources, deliver services, or offer protection. Organizations like Shammo are successful because through their informal practices they construct the quality of relationship that matters most to people.

Endnotes

1. All names in this chapter have been anonymized.

2. In 1972 the Government issued a number of Presidential Orders in which the entitlement of landless households to khas land was confirmed. Normally landless households are given approximately one acre of land.

3. See Devine 1999 for more details.

4. The attempt to build unity among NGOs through the new federation has failed and the level of NGO coordination evident throughout the 1990s has virtually disappeared. Today NGOs see themselves much more as competitors.

5. For more details on the various mobilizing strategies and the final electoral results see Devine 1999.

6. This comment was made not specifically about Shammo but about the country wide NGO electoral program.

7. For overviews and discussions on clientelism in Bangladesh see McGregor (1989) and Wood (2003).

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Joe Devine
Centre for Development Studies
Department of Social and Policy Sciences
University of Bath
Bath BA2 7AY
England
E-mail: J.Devine@bath.ac.uk

Population Growth Projections for Bangladesh from 2000 to 2025: Policy Implications for Education

Halimur R. Khan

Abstract

Bangladesh has a large population compared to its size and resources. In 2000, the population of Bangladesh stood at 130 million people, making it the 8th most populous country on Earth.[1] By 2025 this population will grow to a staggering 192.9 million--an increase of nearly 62.9 million people, representing a growth of 48.3% in 25 years.[2] This huge population explosion will impact almost all aspects of modern life. One important area to be affected by this considerable growth is the education system, especially its capacity to absorb students at the college, graduate and post-graduate levels. Unless the government and the relevant institutions realize the enormity of the impact of population growth and adopt appropriate measures for the education sector, and beyond, the situation portends serious complications, resulting in overall worsening of the quality of life in general, and the quality and capacity of the nation's education system in particular.

Introduction

This paper examines the estimated population of Bangladesh in the years 2000 and 2025, looks carefully at the pattern of population growth, identifies the number of people in the various age-groups (that could be attending educational institutions), and projects the capacity needs (for the purpose of this paper, "capacity" addresses only two major components: 1. the physical buildings and 2. teachers) in education for 2025. Examination of the population will be limited to five groups in the year 2000, and to the population that will attend these institutions in year 2025; the five age-groups correspond to primary (5-9), secondary (10-14), higher secondary (15-19; popularly known as "intermediate college" level), graduate/university (20-24), and post-graduate (25-29) age groups.

First, two population pyramids are examined for the years 2000 and 2025. Looking at the pattern of population growth over time, the paper describes the growth of primary, secondary and higher secondary school age groups, both male and female, as well as the population in the higher education age groups (20-24 and 25-29). Next, the paper describes the changes that are projected between the years 2000-2025 and addresses the area of capacity building and allied services that will be necessary to serve the educational needs of the projected population in 2025. The projections for 2025 are made based on the data available in 2005.[3] The paper concludes with what needs to be done to build an effective and modern education system, consistent with the impending demographic changes.

Bangladesh has a high population density. In 2000, in an area of 56,126 square miles, less than the size of the state of New York, Bangladesh had over 2,316 people per square mile. By 2025, according to the US Census Bureau International Data Base, this density will become almost 3,436 people per square mile. A few comparisons might place this number in perspective: by 2025, Bangladesh's population will be larger than the population of 11 countries in South America (not including Brazil), all 14 countries in the Middle East (not counting the top two—Egypt and Iran), and larger than the population of Germany, France and Spain taken together. One out of every 43 persons in the world of a projected 8.5 billion people in 2025 will live in Bangladesh. The impact of this population growth will be many and diverse. This paper discusses some of the implications of this growth for the education system of the nation, especially at the higher-secondary and undergraduate/graduate levels.

A careful analysis of the population pyramid 2000 reveals a number of notable features: in the year 2000, there were almost 71.5 million school and college-age people representing 52.5% of the total population; and 66 million people, nearly 48% of the population, were between the ages of 20-65--the most productive members of the society capable of providing the educational services needed.

An analysis of the population pyramid 2025 also reveals a number of notable features: the number of school and college-age people would grow to 82.7 million—an increase of more than 11.2 million people from 2000; the percentage of this age-groups in relation to the total population, however, drop from 2000 to 42.8% from 52.5% ; almost 114 million people, 59% of the population, compared to 48% in

Population Pyramids of Bangladesh: A View of Years 2000 and 2025

Figure 1: Year 2000

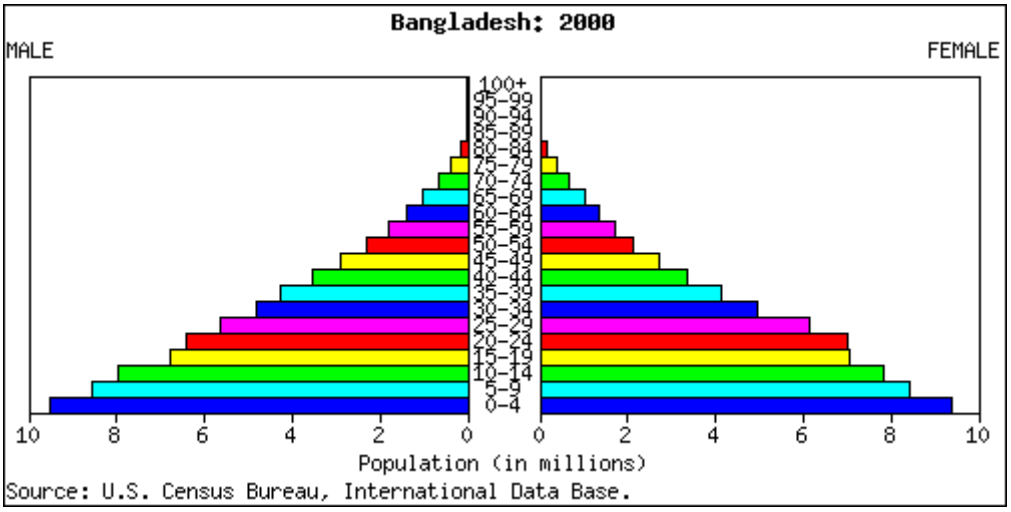
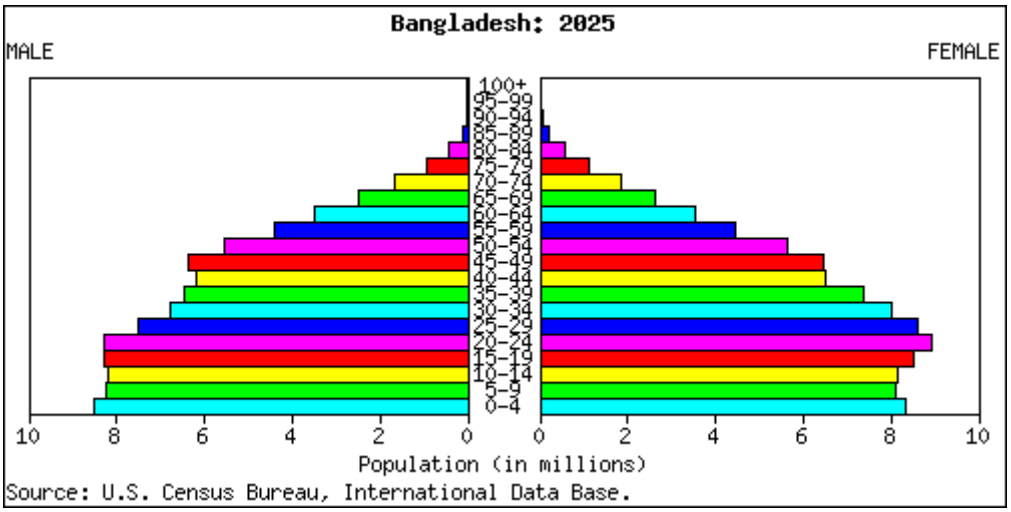


Figure 2: Year 2025



2000, would be between the ages of 20-65, the most productive members of the society, suggesting that this population cohort would also be able to provide the educational services needed by the growing population.

The pyramid also shows that there have been two spurts of population growth, one in 2000-2005 and a bigger one in 1995-2000. The reasons ascribed for such spurts are related to the growth of the national economy, resulting in real GDP/capita growth in Bangladesh at between 5-6% per year, per capita income increase from less than $100 to $470 (The World Bank 2008), and the improvement of important social indicators such as infant mortality, life expectancy and access to clean water, as well as child immunization growth from 10% to 70% (*Bangladesh Education Sector Review*, 2000). Since the two spurts, population growth has slowed down, apparently reflecting an effect of economic growth and increase in the levels of education and literacy rate.

The key demographic indicators have also been

showing improvements. Population growth rate has dropped from 2.0 in 1995 to 1.3 in 2008; total fertility rate has dropped from 3.8% in 1995 to almost 2.8% in 2008. However, despite the drop in growth and fertility rates in current years, demographic pressure will continue to build and will cause major problems for the nation for at least the next five or six decades. With a delay of a decade in achieving replacement fertility levels, an additional 20 to 50 million people are expected to add to the population of the nation, and due to unchecked population growth of earlier decades, almost another 63 million people are expected to be part of the projected population of the nation in 2025 (Table 1). The pressures that the education system will have to bear from this enormous population will be formidable and the challenges it will have to face will be daunting. Let us take a look at the individual population groups and their growth in numbers.

Year 2000-2025: Age-groups 5-9: Male and Female

In 2000, 16.9 million children were in the age-group 5-9, and could attend primary school; among these, 8.5 million male children, and 8.4 million female children were age appropriate to go to school. In 2025, these numbers are expected to go down marginally to 16.3 million—a negative growth of approximately 3.5%. Among them, the male population is expected to go down to 8.2 million--a negative growth of 3.5%, while females are expected to go down to 8.1 million, also a negative growth of nearly 3.5%.

Year 2000-2025: Age-groups 10-14: Male and Female

In 2000, 15.8 million children were between the ages 10-14, and could go to secondary school; among then, 7.9 million were male and 7.8 million were female children. In 2025, the population in this age-group is expected to grow by 3.1%, to 16.3 million children. Among them, 8.2 million would be male and another 8.1 million would be female children. The growth of population in this age-group would be approximately 3.1%.

Year 2000-2025: Age-groups 15-19: Male and Female

In 2000, a total of 13.8 million males and females belonged to the age-group 15-19; among them, 6.7 million males and 7 million females were age appropriate to go to higher secondary school. In 2025, this population is expected to spike to 16.8 million—a growth of nearly 21.7%. And, there would be 8.3 million men and 8.5 million women. The male population would grow by 23.8% and female population by 21.4%.

Year 2000-2025: Age-groups 20-24: Male and Female

A total of 13.3 million young men and women were between the ages of 20 and 24 in 2000; 6.3 million among them were young males and another 6.9 million were young women. By 2025, this number will grow to 17.2 million—a robust growth of 3.9 million people representing an estimated increase of 29.3%. Males will grow by 1.9 million, i.e., a rise of 30%--from 6.3 million in 2000 to 8.2 million in 2025; and females will grow by 2 million, from 6.9 million in 2000 to 8.9 million in 2025, also a growth of 29%.

Year 2000-2025: Age-groups 25-29: Male and Female

In 2000, 11.7 million adults belonged to the age-group 25-29; among them, 5.6 million were males and 6.1 million were females. In 2025 this number is expected to grow spectacularly to 16.1 million people—4.4 million additional adults. Within this population, 7.5 million would be males—an increase of 1.9 million potential students, and 8.5 million women—an additional 2.4 million adult women representing a growth of 39.3%.

Changes in Student Population Projected from 2000 to 2025

Based on Table 1 and the data from the two pyramids, the first major change that is projected between the years 2000-2025, taking the current rate of attendance as constant, is a general growth of school and college going population by 11.2 million—a growth of 15.6%. Even before looking at the changes projected for specific age-groups, these numbers suggest that a major capacity building effort in the education system will have to be undertaken if the nation wants to keep educating its children at the current rate. This also means increasing the current capacity of the education system by almost one sixth (i.e., for every six existing schools and colleges, one more will have to be built to accommodate this growing population).

Enrollment of students, especially in the higher educational institutions, at 1.6% of the age-appropriate group (see Table 2),[4] is far below average and considered low for a developing economy; and if

Table 1: Growth of School & College going Population in Bangladesh from 2000 to 2025

	2000			2008			2025			Growth: 2000-2005: In Million	Growth: 2000-2025: In %
	Tot Pop	M	F	Tot Pop	M	F	Tot Pop	M	F		
Age											
All ages	136.6	68.2	68.4	154.0	74.5	79.4	192.9	93.9	99.0	56.3	41%
5-9	16.9	8.5	8.4	18.3	9.1	9.1	16.3	8.2	8.1	-.6	-3.5%
10-14	15.8	7.9	7.8	17.1	8.5	8.6	16.3	8.2	8.1	.5	3.1%
15-19	13.8	6.7	7.0	15.4	7.2	8.2	16.8	8.3	8.5	3.0	21.7%
20-24	13.3	6.3	6.9	12.7	5.5	7.1	17.2	8.2	8.9	3.9	29.3%
25-29	11.7	5.6	6.1	12.3	5.4	6.8	16.1	7.5	8.5	4.4	37.6%
Total school/ college pop	71.5			75.8			82.7			11.2	15.6%

Source: U.S. Census Bureau, International Data Base: Data retrieved December 15, 2008. [5]

Table 2: Percentage of Enrollment in Higher Education of Age-group 17-23 of Select Countries & the relationship of national education expenditure with income: Year 2006 [6]

	Country	% attending university	Education expenditure as % of GDP	Per Capita Income in 2007
1	Bangladesh	1.6% (4%)	2.7%	$470
2	Pakistan	3.5%	2.6%	$2,400
3	India	12%	3.2%	$1,000
4	Malaysia	29%	6.2%	$6,452
5	Thailand	37%	4.2%	$3,737

Source: UGC Report 2006 & UNICEF 2008

Table 3: Number of Universities in Neighboring Nations: Year 2008

	Country	Population	# of universities	Ratio: university: pop
1	Bangladesh	154 m	74	1: 2,000,000
2	Pakistan	172 m	106	1: 1,600,000
3	Malaysia	23 m	23	1: 1,000,000
4	Thailand	65 m	67	1: 970,000
5	India	1001 m	1600	1: 625,000

Source: IDB & UNICEF, 2008

the nation decides to follow the lead of the international organizations and of other countries to establish the goals of achieving 100% secondary education, encourage more children to go to higher secondary school, and help more young people to pursue higher education, the capacity addition to the education system will have to be far larger.

Given the growth of the university going population in the past decade, it is conceivable that predictions made based on the current rate of attendance (of school, college and university) will fall short of actual needs in 2025. If the growth of the university-going population that has occurred in just the last decade is any predictor, then the needed capacity increases to accommodate this population is going to

be significantly large. Bangladesh has seen a remarkable growth in students attending higher education since the passage of the Private University Act of 1992. In 1998, all of the private and public universities recorded enrollment of 8,718 students attending undergraduate and graduate programs in the universities. In only three years, by 2001, this number grew to 35,968—a total growth of more than 400%; and by 2006, the private universities alone combined an enrollment of more than 100,000 students—a staggering growth of nearly 1200% compared to 1998. A University Grants Commission (UGC) report projects that the total higher education enrollment might grow from 1.0 million in 2005 (this number includes degree colleges, but does not include the non-teaching public universities, i.e., National University and Open University) to between 1.3 and 3.5 million in 2025 (UGC, 2007). Let us look at the individual age-groups to establish their specific needs for capacity.

Capacity development needs in educational services in 2025

The most important and immediate educational needs that Bangladesh will have to provide to serve this growing population are capacity additions (Andaleeb 2003). The nation will have to build physical infrastructure and facilities, create and supply teaching and learning materials, develop human resources (e.g., teachers, principals, inspectors, supervisors, administrators, etc.), and establish proper management and school governance.

The population pyramid 2005 and Table 4 provide data on the total number of age-appropriate students in each age-group, the percentage and the number of students who attended school, total number of schools and colleges (physical buildings), and total number of teachers that provided educational services. Based on the numbers available for this year, this paper projects the numbers of schools, colleges as well as teachers for 2025. The reason for taking year 2005 as the reference point, as explained earlier, is the availability of data on the items discussed.

As seen in Figure 3 and Table 4, in 2005, 18.2 million children were age-appropriate for primary school, out of which 90%, i.e. 16.2 m attended; and, 80,397 schools and 344,789 teachers served the educational needs of this population. During this same year, 17 million students were in the age-group for secondary school; 44% of this population, i.e., 7.4 million attended 18,500 schools and were served by 232,929 teachers. Approximately 1.3 million students or 10% of a total population of 13 million students in this age-group attended 3,150 higher secondary schools/intermediate colleges where 90,401 teachers were serving. And a very small percentage, i.e. 1.6%, of students out of a total population of 13 million in the age-group 20-24 attended 74 higher educational institutions/ universities served by a total of 10,339 professors and instructors.[7]

To project the capacity development for 2025, let us, first, take the rate attendance (third column in Table 4) from year 2005 and assume that this rate will remain same through 2025. What we find, are the results shown below in Table 5 taking into account the total population in 2025 in these age-groups.

Figure 3: Year 2005

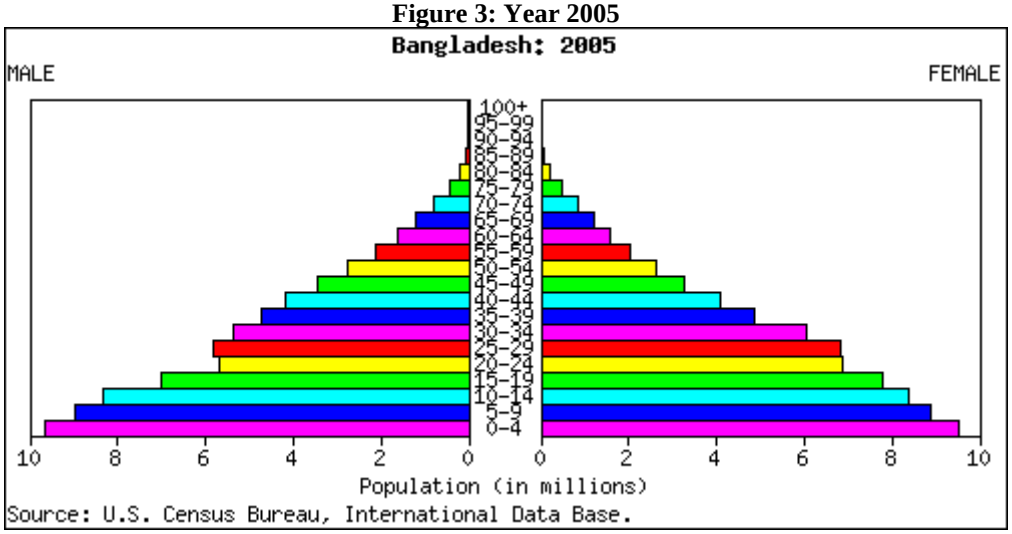


Table 4: Education Statistics of Select Items for 2005

	Tot # of age-appropriate children	% of children attended school	Tot # of children attended school	Tot # of institutions/ physical buildings	Tot # of teachers serving
Primary School: Age 5-9	18.2 m	90%	16.2 m	80,397	344,789
Sec School: Age 10-14	17 m	44%	7.4 m	18,500	232,929
Higher Secon/ Int. College Age 15-19	13 m	10%	1.3	3,150	90,401
University: Age 20-24	13 m	1.6%	207,577	74	10,339

Table 5: Year 2025: Population growth and capacity needs at the rate of attendance seen in 2005

	Tot # of Age-appr. Students	% of Students @ 2000 rate of growth	Tot # of students expected to attend	# of institutions needed to accommodate	# of add'l institutions that will be needed	# of teachers needed to teach	# of add'l teachers that will be needed
Primary School: Age: 5-9	16.3 m	90%	14.7 m	72,952	-7445	312,234	-32,555
Sec School: Age 10-14	16.3 m	44%	7.2 m	18,000	-500	226,800	-5,200[8]
Higher Sec/ Int.College: Age 15-19	16.8 m	10%	1.6 m	3,883	733	111,437	21,036
University: Age: 20-24	17.2 m	1.6%	275,200	98	24	13,692	3,353

Data from Table 5 show the projected population in each group in year 2025 and the corresponding needs for educational institutions and teachers.

Because of the falling birth rate, there appears to be some relief in sight in terms of the age-group 5-9 (a negative growth rate of 3.5%), and the secondary school population, Age 10-14 (-3.1%), implying that there may not be any need to build additional primary and secondary schools or to increase capacity. In fact, based on the average number of children per school in 2005, almost 7,445 primary and 500 secondary schools will not be needed in 2025. Most of the population growth, however, will take place in the areas of higher-secondary and higher/university levels of education, with the largest capacity-building needs projected in the area of higher education. Almost 300,000 more students will attend intermediate college in 2025 requiring an additional 733 colleges and 21,353 teachers to serve this age-group population. And, nearly 68,000 more students will want to attend university in 2025. This will require the nation to build an additional 24 universities at the *current rate of students per university*, and add another 3,353 university professors and instructors at the current student-teacher ratio.

However, since today's "knowledge economy" and "information society," will gradually become more intensely competitive by the year 2025, invariably the completion of high-school, and even a university degree will gradually become almost a "requirement" to get good jobs and achieve higher standards of

living; this will drive the demand for higher education exponentially, as it has been in the past few decades, especially in the developing nations (Psacharapoulos 2002 & Schultz 2001). Aside from this, there is also an increasing awareness among the population that education is directly related to income (see Table 2 for relationship of education with per capita income; also, Hanushek, 2000). Let us, then, look at some hypothetical situations taking into account this demand for education in the next two decades or so. Tables 6, 7 and 8 below are some possible scenarios and projections for primary, secondary, higher secondary, and university students and their demand for educational services.

The data for primary and secondary school age population and their growth is quite realistic. It is not unlikely that 10-year of schooling will soon become mandatory, and a reality, in Bangladesh, as in most developed nations, mainly because of the financial incentives (Reimers 2000; Sceerens 2000) and with the growing call for universal education. And, if this were to happen by 2025, Bangladesh will have to invest major resources for developing capacity to provide the educational needs of this group: An additional 697 primary schools and 22,250 secondary schools will have to be built (or, capacity developed in existing schools to absorb these students); at the same time, the nation will have add almost 282,814 new teachers for these schools!

A massive capacity development drive will have to be undertaken if 100%, 50% or even 25% of the secondary school population decide that they will go to college. As can be seen in Table 7, at 25% increase of attendance, 9,450 two-year colleges will have to be built and an additional 271, 203 teachers trained; at 50%, the nation will require an additional 22,050 colleges and 632,807 new teachers; and, at 100%, an incredible 47,250 colleges and almost 1.3 million teachers will be needed to serve this population.

Table 6: 2025: Primary & Secondary School: Age-groups: 5-9 & 10-14

	Tot # of Age-appr Students	% of Students @ 2000 rate of growth	Tot # of students expected to attend	# of institutions needed to accommodate	# of add'l institutions that will be needed	# of teachers needed to teach	# of add'l teachers that will be needed
Primary School: Age: 5-9	16.3 m	100%	16.3 m	80,893	697	347,082	2,293
Sec School: Age 10-14	16.3 m	75%	12.2 m	30,562	12,062	385,081	152,152
Sec School: Age 10-14	16.3 m	100%	16.3 m	40,750	22,250	513,450	280,521

Table 7: 2025: Higher Secondary/Intermediate College: Age-group: 15-19

	Tot # of Age-appr Students	% of Students @ 2000 rate of growth	Tot # of students expected to attend	# of institutions needed to accommodate	# of add'l institutions that will be needed	# of teachers needed to teach	# of add'l teachers that will be needed
Higher Sec/ Int.College: Age 15-19	16.8 m	25%	4.2 m	12,600	9,450	361,604	271,203
Higher Sec/ Int.College: Age 15-19	16.8 m	50%	8.4 m	25,200	22,050	723,208	632,807
Higher Sec/ Int.College: Age 15-19	16.8 m	100%	16.8 m	50,400	47,250	1.4 m	1.3 m

Table 8: 2025: University: Age-group: 20-24

	Tot # of Age-appr. Students	% of Students @ 2000 rate of growth	Tot # of students expected to attend	# of institutions needed to accommodate	# of add'l institutions that will be needed	# of teachers needed to teach	# of add'l teachers that will be needed
University: Age: 20-24	17.2 m	1.6%	275,200	98	24	13,692	3,353
University: Age: 20-24	17.2 m	5%	860,000	306	232	32,480	22,111
University: Age: 20-24	17.2 m	12% (as in India)	2.1 m	748	674	94,452	84,113
University: Age: 20-24	17.2 m	29% (as in Malaysia)	4.9 m	1,778	1,704	238,595	228,256
University: Age: 20-24	17.2 m	37% (as in Thailand)	6.3 m	2,268	2,194	307,272	296,933

Incredible as it may sound, the possibility of opening such a flood-gate is not impossible. If the recent hike in demand for university education is any indicator, the government may as well take heed. At the growth rate seen in 2005, an additional 24 universities (or, the development of similar capacity) will be necessary to serve the demand of this population. Taking into account the fact that it took over 35 years to build about 50 additional universities (since the birth of Bangladesh), 24 additional universities in less than 20 years will be a Herculean task. And, if, for the reasons of competitiveness and economic growth, prosperity, etc., this population decides to go in large numbers for higher education, it will become a major challenge for the government to accommodate their demands. If 5% of Bangladesh's university-going population decide by 2025 that they need higher education, the country will need an additional 232 universities and 22,111 professors to provide this education; if the nation decides to catch-up to our neighbor India's level of higher education (at least, in numbers of students attending university), it will have to build 674 universities and train/find 84,113 professors (see column 3, rows 5, 6 & 7 in Table 8). And should Bangladesh decide to catch up with Malaysia and Thailand, it will have take on the daunting, and as it appears now—virtually impossible, task of building an additional 1,704 and 2,194 universities respectively. Is Bangladesh prepared to move onto the 21st century? Looking at the data, it appears that the nation and its leadership has a lot of work to do to get anywhere close to even our neighbors, let alone the developing nations.

There are other, even more complicated, challenges to be met such as the following: build a wider and deeper foundation of basic education, strive for equity in educational opportunities and quality in learning achievements, transfer vocational training to non-government institutions, revitalize, and reorient and partially privatize higher education. Most of the existing higher educational institutions in Bangladesh are far behind in achieving these goals. A recent UGC Report notes that:

"The public universities, except for the top few, do not have the facilities needed for quality teaching. The faculty is not up to an appropriate standard, and student quality is also poor… A large number of private universities are operating in makeshift arrangements. They have failed to meet the minimum requirements of physical infrastructure, full-time qualified faculty, libraries, teaching aids and other facilities… National university colleges are even worse. Teaching quality is generally unsatisfactory. Logistics and facilities are also poor. In Bangladesh, the higher educational institution and the programmes they offer largely operate without any sustained and periodic critical review that is needed for quality maintenance and enhancement (UGC, 2006, p. 14)."

And, emphasizing the need for governance and management of education based on the needs of a changing society and the world, rather than tradition and custom, the Chief Adviser of the Care-taker Government of Bangladesh recently suggested the following:

"We are aware of instances where weakness in governance, including corruption, waste, mismanagement and inefficiency, undermine the initiatives for reform in education and prevent achievement of intended outcomes…We should devise an optimal arrangement now for all education-related service-providers in a geographic unit, such as

an upazila, to function cohesively. They should work together through a mechanism of local coordination to ensure that every child can participate in an institution which meets the minimum agreed standards of instruction, whoever the service provider may be. The mental barriers between the government and non-government programs must be bridged in order to fully utilize existing social capital and achieve educational goals (Governance in Education Conference, 2008a)."

Conclusion

The analysis in this paper does not address some of the more fundamental problems of education in Bangladesh which are formidable challenges in their own right and which must also be tackled adequately. These issues include: improving the quality of education, developing relevant curriculum, training and recruiting good quality teachers, establishing accountability, revamping and establishing effective assessment tools (exams, reviews, etc), developing research institutions and departments, proper education governance and building linkages and partnerships between academic institutions, industries and employers.

Each one of these challenges involves myriad issues that need to identified, studied and resolved. What is most important is having a strong political will to address the outlined challenges. Finally, the government and the nation will have to mobilize vast amounts of planning, management and financial resources for effecting these changes in educational services necessary to serve the projected population in 2025. Only when all of these issues are approached in a systematic manner and resolved with care and competence, can Bangladesh and its younger generations expect to see a bright and hopeful future.

Endnotes

1. Bangladesh is the 8th most densely populated nation on earth not taking into account the 3 city-states of Macao, Monaco and Hong Kong. See http://www.nationmaster.com/graph/geo_pop_den-geography-population-density.

2. U.S. Census Bureau, International Data Base.

3. The 2025 projections are made on the basis of data available for 2005 and not on the basis of 200 because data on the number of schools and colleges are available from Bangladesh Census Bureau only for year 2005.

4. Another example of inconsistency and the difficulties of policy projection can be seen in the following example: When population pyramid data was retrieved from US Census Bureau International Data Base in 2005, this is how they appeared for the years 2000 and 2005. (See the two graphs below.) By now, December 2008, the data have changed significantly (this paper bases its predictions on data currently available). If predictions were to be made on the basis of data shown in 2005, the analysis and the policy implications would have been very different. The population pyramid for 2000 shows that there have been two spurts of population growth, one in 1980-85 and a bigger one in 1985-90. The effect of these two spurts would be far reaching, as shown in the next graph, where this population group bulges as they attain ages between 35-45. These graphs were retrieved on October 15, 2005.

5. The basic data, e.g., "2000 Tot Pop," and "2008 Tot Pop" were retrieved from IDB; however, the rest of the numbers were estimated by the author.

6. In 2005, according the Bangladesh Bureau of Statistics, there were 207,577 students attending the 74 universities. This is 1.6% of the total age-group. This number does not include various other types of educational institutions, e.g., madrashas, vocational and technical schools, as well as students enrolled in the National and Open universities. While, the government reports these students as "higher education population" (and, hence gets to higher % of population attending university, they have not been included in our analysis, especially because the last two mentioned are not teaching institutions. The number of students included in the latter schools amounts to over 518,000, about 4% of the total age-group population.

7. Data on age-group 25-29 is not available separately from the age-group 20-24.

8. While compared with year 2000, the population in the age-group 10-14 appears grow by 3.1% in 2025. However, when compared with year 2005, the population drops by 3.1%.

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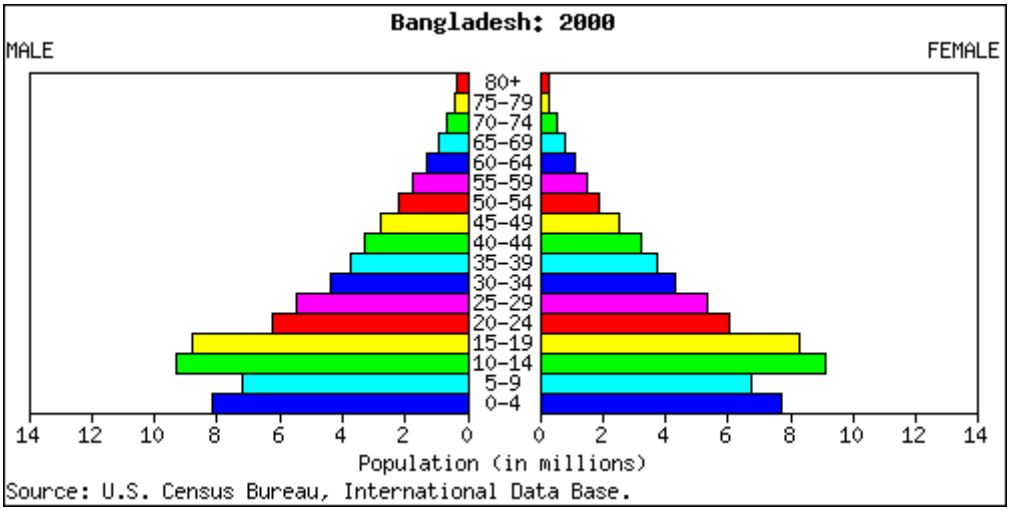
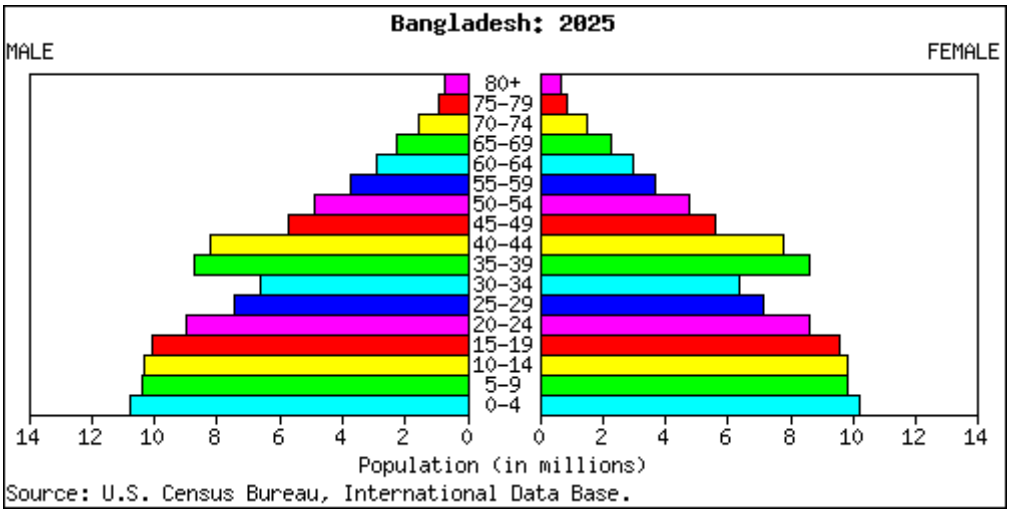
Halimur R. Khan, Ph.D.
U.S. Air Force Academy
Assistant Professor of Russian
USAFA Foreign Language Department
2354 Fairchild Drive, Suite 4J6G
USAF Academy, CO 80840-6258
halimur.khan@usafa.edu


Bangladesh: 2000
MALE
FEMALE
80+
75-79
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4
14 12 10 8 6 4 2 0
0 2 4 6 8 10 12 14
Population (in millions)
Source: U.S. Census Bureau, International Data Base.


Bangladesh: 2025
MALE
FEMALE
80+
75-79
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4
14 12 10 8 6 4 2 0
0 2 4 6 8 10 12 14
Population (in millions)
Source: U.S. Census Bureau, International Data Base.

A Comparison of Health Service Quality in Public, Private, and Foreign Hospitals: Perceptions of Bangladeshi Patients

Syed Saad Andaleeb

Abstract

This study compares the quality of healthcare services in public, private and foreign hospitals as perceived by hospital patients from Bangladesh. With poor funding and lack of improvements in the public health services, private health care has seen rapid growth. However, their quality of services remains in question. With the growing number of patients going out of the country for healthcare needs, it important to compare the perceived service quality in the three types of hospitals to gain insights and establish benchmarks so that patients do not have to go overseas for health services and so that both public and private hospitals are able to upgrade their services to better meet the needs of patients. To ensure comparability, similarly "reputed" hospitals were selected from the three groups. A survey was conducted through exit polls of a random sample of 400 patients released from selected hospitals in Dhaka City. Users of foreign hospitals were selected using snowball sampling for lack of lists. Using multivariate and univariate ANOVA, significant differences were found between the three groups on service quality measures. The findings suggest that service delivery by hospitals in Bangladesh has much room for improvement. In particular, to stop the outflow of foreign exchange, the improvements, at a minimum, must match the services provided by foreign hospitals. To accomplish this, policy measures and improved managerial practices must be introduced into the country's health care system.

Introduction

The health sector in Bangladesh occupies an enormously important position in ensuring sustainable overall socioeconomic advancement of the country. In addition to promoting general well-being, its ability to serve the healthcare needs of the population has significant economic implications derived from productivity increases. Following the principles of universal health coverage, giving priority to the poor and most vulnerable as prompted by the Millennium Development Goals, and pursuing better quality of life for its citizens, the Government of Bangladesh (GOB) has embarked on a multi-pronged strategy including greater orientation to client needs, higher quality of services, provision of an essential services package, expanded private sector role, and a cost recovery program that is coupled with establishing a decentralized health management system (WHO, HNPSP 2003-06).

While the efforts of the government and the NGOs in the health sector have met with some success, as reflected in child and maternal mortality figures, there are also serious problems in the country's public healthcare system. Media stories regularly feature unsavory practices and service failures that can shake the confidence of the users of health services in this sector. The Bangladesh Government and its development partners have also acknowledged their concerns about the quality of healthcare services (HNPSP, 2003-2006). According to them:

> "Absenteeism of health care providers is a major concern; consultation time is very short (2-3 minutes), with almost no privacy. Health facilities hardly open in time except at rural facilities (UHFWC, CC). A good number of posts are lying vacant at Upazila and below levels. Rural facilities need more budget to meet local needs. Most of the time, providers are busy with other activities, including private business. Unavailability of drugs is the single most important reason for people's dissatisfaction about public health facilities."

These instances reflect weaknesses in health service delivery, especially in the public hospitals, that must be quickly and responsibly addressed.

Failing the customer, however, is not uncommon even in the Western countries and may be difficult or impossible to eliminate (DeWitt and Brady 2003). Keaveney (1995) suggests that service failures and poor recovery strategies are leading causes of customer defection in service organizations. Failures arise from unavailable and unreasonably slow services, inattention to customer needs, and a host of other reasons (Bitner, Booms and Tetrault 1990). Dube and Maute (1996) review the literature to suggest that over half of customer switching behavior may be attributed to service failure and poor

management of service recovery in the developed countries.

With population increases and a burgeoning need for health services, there is also a growing private healthcare system that has begun to emerge with the government's encouragement. Despite higher direct costs, it is not unusual to see long waiting lines for private care. This suggests that patients may be deriving certain benefits from this sector not available to them from the public sector. We believe this may be so because of better service quality.

Significantly, also, there is growing defection of a large number of Bangladeshi patients to foreign hospitals in search of quality care despite the financial costs and the cumbersome processes involved in getting visas, obtaining foreign exchange, arranging for transportation, accommodation and food, and finding the right service providers. Here too, the perceived benefits seem to exceed the costs. The resulting huge losses of foreign exchange for Bangladesh, estimated by one study (IHE, 2002) at Tk. 500 million (US $1 = Tk.60 at present) a year and by Bayes (1999) at Tk.10 billion (US $1 = Tk.50 at the time) represents huge costs that the nation endures for lack of quality healthcare services in the country.

Objectives and Propositions

The objective of this paper is to provide a comparative assessment of the quality of services received by patients in Bangladesh from three different health sectors: public, private and foreign. The assessment may be used as a basis or benchmark for future studies to track changes in the quality of services received. Comparisons across sectors are particularly useful for developing standards and for devising delivery mechanisms to ensure that the service standards are attained. It should also sensitize hospital and healthcare planners to those areas of service that might be significantly improved.

Three propositions guided the study. First, given the size, scope, complexity, and lack of well-conceived and integrated improvements in the public health sector, oft-reflected in various unpleasant media reports and government documents, it was felt that hospitals in the public sector would be rated as average or lower on service. Long delays in obtaining services, the need for patients to furnish various supplies and medical tools, and the commonly experienced rude behaviors of healthcare staff are some of the reasons for which public hospitals were expected to earn low service quality ratings. Second, it was felt that with a rapidly growing private health sector, with its particular system of incentives and substantial profit-making opportunities, hospitals in the private sector would obtain better service ratings than hospitals in the public sector to be able to draw more patients, serve them well, and be rewarded commensurately. Better incentives in this sector are purported to affect the level of service that is subsequently expected to be reflected in the patient ratings. Third, significant outflows of foreign exchange have been noted for availing health care in foreign countries. This outflow may have increased substantially in recent years according to expert estimates, the reason for which is better, more integrated, and comprehensive services offered by the foreign hospitals and doctors. Moreover, driven by their own incentive structures and processes while serving the more affluent and being paid in hard currency, it was expected that foreign hospitals would provide a memorable service experience to patients from abroad as a way of promoting their services to additional clients via word-of-mouth while retaining the customers served. Hence, service quality ratings were expected to be the highest for foreign hospitals.

Metrics Important to Patients

This paper uses patient-centered metrics to assess the quality of services received by patients. In this regard, past research in the advanced countries has shown that the patient's perspective is very important in shaping service delivery (Rahmqvist 2001, Stewart 1984, Makoul, Arnston and Schofield 1995). It is also well-recognized that while patients may be unable to judge the technical quality of service, they certainly can judge how they were treated.

It is important that certain criteria be used to assess patients' perceptions of hospital service quality. Earlier studies (Andaleeb 2000, 2001) suggest that the SERVQUAL framework *(*Parasuraman, et al. 1985, 1988, 1991*)* with some refinements as suggested by Carman (1990) may be used in the context of Bangladesh. The SERVQUAL framework was thus embellished on the basis of focus group discussions to include additional elements pertinent to the local culture. The following metrics are reflective of the service dimensions that patients

desire and expect in their interactions with hospitals. Addressing them systematically is likely to bring about needed changes in the healthcare system.

Service Factors

Assurance: Knowledge, skill and courtesy of the doctors and nurses are key elements that can provide a sense of assurance to patients that they will be well looked after. For a service that is largely credence based (Zeithaml and Bitner 2000), where customers may find it impossible to evaluate the quality of the services received even after purchase and consumption, a sense of assurance engendered by the service providers can greatly influence patient evaluations. When patients feel assured that the healthcare system would correctly interpret laboratory reports, diagnose the disease competently, provide appropriate explanations to queries, and generate a sense of safety, they are likely to feel more assured.

Reliability: Reliability refers to providers' ability to perform the promised service dependably and accurately. In Bangladesh reliability of the provider is often attenuated by prescription of unnecessary medical tests, haphazard supply of drugs at the hospital premises, irregular supervision of patients by care providers, inability to provide correct treatment the first time, etc.

Responsiveness: A general expectation among patients is that the hospital staff would respond promptly when needed. Patients also expect that required equipment would be available when needed, found to be functional all the time, and be able to provide quick diagnoses of one's health condition. In addition patients also expect prescribed medicines to be available when needed and effectively administered as other indicators of responsiveness.

Communication: Communication is vital in the hospital setting whereby service providers understand patients' concerns and convey to them the needed health regimen. If a patient feels alienated, uninformed, or uncertain about her health status and outcomes, it may affect the healing process. When patient concerns are readily discussed, it can alleviate their feelings of uncertainty. Also, when the nature of the treatment is clearly explained, patients' awareness is heightened and they are better sensitized about expected outcomes. In general, patients expect doctors and nurses to communicate clearly and in a friendly manner any information regarding laboratory tests, X-Ray results, diagnoses, prescriptions, health regimen, etc.

Empathy: Empathy is defined as the caring and individualized attention that patients receive. Healthcare providers' empathy and understanding of patients' problems and needs can greatly influence patients' service quality evaluations and overall satisfaction. Patients desire service providers to be attentive and understanding towards them. Thus, doctors and nurses ought to give each and every person in their care a patient hearing and share their their empathy.

Tangibles: Physical evidence that the hospital will provide satisfactory services can be very important to patient satisfaction judgments. Generally, good appearance of the physical facilities, equipment, personnel, and communication materials create positive impressions. A clean and organized appearance of any hospital, its staff, its premises, restrooms, equipment, wards and beds can influence patients' impressions about the hospital and its likely use.

Procedures: This factor refers to an orderly management of the overall healthcare service process. It constitutes patients' expectation that doctors would maintain proper visiting schedule, and that there would be structured visiting hours for relatives, friends etc. Maintaining updated patient records and adopting proper patient release procedures are also pertinent to ensuring consistent quality of services.

Availability/Access: Availability of doctors, nurses and hospital beds round the clock are of general concern among the patients that reflects the level of access they have to healthcare. Scarcity of clinical staff, beds and cabins in the government hospitals sometimes forces patients to choose private hospitals –in certain cases non-reputed ones. When the hospital provides easy physical access and where doctors, nurses, beds and/or cabins are easily available, patient evaluations of service quality are likely to be better.

Methods

Secondary research

Some research on Bangladesh's healthcare system, albeit limited, is now available in journal publications, government documents, and reports of international organizations. However, the issue of

healthcare "service quality" has barely been examined. Thus, additional secondary sources were consulted from the developed world for guidance and adaptation. The SERVQUAL framework was prominent in this literature that helped conceptualize service quality.

Qualitative research

To confirm the dimensions of services derived from the SERVQUAL literature, the research team initially conducted in-depth discussions with 10 patients (covering the three types of hospitals) about their service experiences. The elements uncovered as a result were grouped under the major factors discussed in the patient metrics, leading to the selection of eight service constructs (i.e. Assurance, Reliability, Responsiveness, Empathy, Tangibles, Communication, Procedures, and Access). The first five factors represent the original SERVQUAL dimensions, while the remaining three factors emerged from the in-depth interviews. Other aspects such as food quality and ambulance services were dropped from our initial list because they were not relevant for all hospitals.

Questionnaire Design

A preliminary questionnaire was developed in English based on secondary and qualitative research. The questionnaire was translated into Bengali and retranslated several times until it was user-friendly and captured the desired constructs. Reasons for the study, complete confidentiality guarantees, the right of refusal to answer specific questions, and contact information were provided to the respondents according to internationally accepted research protocol. The questionnaire was pre-tested several times to arrive at appropriate wording, format, length, and sequencing of the questions.

Data Collection Method

A ten-member team of final year students of two private universities in Bangladesh were recruited for data collection. They were properly briefed about the objective of the study and the questionnaire. They were also trained rigorously to collect unbiased and meaningful data.

A permission letter from the Ministry of Health and Family Welfare (MOHFW), Government of Bangladesh (GOB), was forwarded to the respective hospital administrators to provide necessary help and to cooperate with the data collectors. The researchers also supervised the data collecting teams at different hospitals and assisted with obtaining the list of patients to be released. Upon receipt of this list, the data collectors used random sampling procedures to select respondents and administer the questionnaire.

Sampling

The population of the research was defined as those who have been in-patients in the selected public and private hospitals in Dhaka City or in reputed hospitals in a foreign country within the past twelve months. Hospital reputation was controlled for to ensure comparability. Simply put, it did not make sense to compare "any" local hospital with foreign hospitals which are often carefully selected by patients availing their services. Our comparisons, therefore, included the set of hospitals that are deemed reputable in the three sector categories: public, private, and foreign. Dhaka City hospitals were chosen because it hosts many more hospitals than elsewhere, attending to a diverse set of patient afflictions and needs. Resource and time constraints also necessitated that the study be confined to hospitals in one city.

Two separate lists of public and private hospitals in Dhaka, along with their bed capacity, were obtained from the MOHFW. From the public hospital list, Dhaka Medical College and Mitford hospital were chosen purposively as reputed hospitals that handle patients with various health problems. From the list of private hospitals, again three reputed hospitals were chosen purposively. These include Central Hospital, Holy Family Hospital, and Monowara Hospital. That these hospitals were "reputable" was affirmed by officials of the MOHFW, GOB.

To ensure representation, sample sizes of 150 were planned to be collected from the public and private hospitals. The list of patients, ready to be released on a particular date, was obtained from the respective ward-in-charge of the public hospitals and the patient relations in-charge of the private hospitals. From these lists, using simple random sampling, patients were selected keeping the targeted sample size in mind.

Data for the patients availing foreign hospital care were difficult to collect using probability sampling as no lists were available for this category of patients. As a result, the snowball sampling method was used. Since people using foreign hospitals are looking for

quality services, it was assumed that they would gravitate toward the better known hospitals found in Thailand, Singapore, and India. This was the main reason for comparing "reputed" hospitals. Data were collected only from those respondents who had been admitted as in-patients within the past twelve months. Overcoming a variety of challenges, a total of 413 surveys were completed of which 13 were discarded because of excessive missing data and other errors and inconsistencies.

Analysis

Frequency distributions were obtained to check for data entry errors (i.e. unrecognized or missing codes) and to obtain descriptive statistics (means and standard deviations) for each constructs and for all three categories of hospitals.

To affirm the dimensions of service quality that were deemed important, factor analysis was performed with varimax rotation. Items loading together on a common factor (with Eigenvalues equal or greater than 1.00) were checked to see if they were meaningfully clustered. When this was not the case, items were deleted one at a time until the factor structure made the most sense.

Results

Measures and Dimensions

It is interesting to note that the dimensions that emerged from the analysis were somewhat different from the ones posited. For example, the measures of "Tangibles" split into two components: staff and facilities (i.e., human and non-human components) that made clear sense. Also, instead of loading on the posited service factors, doctors and nurses were seen as the defining and central elements of service provision. Consequently, the derived factors epitomized doctors' service orientation and nurses' service orientation as composites of the chosen items across different constructs such as reliability, responsiveness, assurance, and communication. Thus, most of the key items purported to measure the proposed service dimensions were retained; they merely loaded differently as constructs, but in a manner that was easy to interpret. Varimax rotation and the final rotated solution resulted in six factors comprised of thirty-two items (see Table 1) that explained 66.68% of the cumulative variation. Items for each factor were separately factor analyzed. In all cases a single factor was recovered, indicating convergent validity.

The derived factors, representing a composite of items, were re-labeled as "doctors' service orientation (DSO)", "nurses' service orientation (NSO)", "tangibles (hospital)", "tangibles (staff)", "availability", and "access." The constructs also demonstrated robust correlations. These strong and significant associations with the correct signs provided evidence of predictive validity.

Reliability values using Cronbach's Alpha were very satisfactory and in accordance with the recommendations of Nunnally (1978), that alpha values should be .70 or greater. The obtained values are shown below:

Doctor Service Orientation (composite of 13 indicators)	.95
Nurse Service Orientation (composite of 6 indicators)	.90
Tangibles (Hospital) (composite of 6 indicators)	.91
Tangibles (Staff) (composite of 2 indicators)	.87
Access (composite of 3 indicators)	.73
Procedures (composite of 2 indicators)	.69

Findings

It was posited that foreign hospital would be rated higher that private hospitals and that private hospitals would be rated higher than public hospitals on the selected dimensions. To test this proposition, multivariate and univariate ANOVA were used. Multivariate ANOVA (or MANOVA) is used as a generalization of ANOVA given that we use several dependent variables.

The multivariate tests (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root) indicated that the null hypothesis of equal group centroids can be rejected. In other words the combination of dependent variables shows significant differences in patient ratings across the treatment conditions. Only when the multivariate main effect is

TABLE 1

Factor Analysis with Varimax Rotation

	Component					
*	DSO	TANGBL (Hospital)	NSO	TANGBL (Staff)	ACCESS	PROCESS
x45	.750	.262	.119	-.028	.002	.116
x50	.750	.210	.246	.192	.086	.038
x46	.741	.257	.201	-.030	.064	.222
x44	.729	.212	.089	.083	.000	.124
x51	.705	.157	.309	.251	.151	.100
x53	.681	.215	.250	.130	.300	.008
x39	.670	.142	.262	.189	.214	.285
x52	.623	.170	.174	.269	.157	.147
x40	.592	.077	.163	.375	.191	.334
x31	.570	.218	.361	.216	.366	.107
x38	.567	.067	.155	.277	.293	.398
x23	.491	.179	.278	.230	.328	.214
x25	.473	.028	.155	.165	.263	.442
x6	.181	.728	.142	.197	.147	.116
x10	.173	.720	.331	.151	.090	.093
x19	.208	.715	.274	-.118	.185	.076
x7	.250	.697	.175	.259	.073	.206
x9	.280	.624	.234	.181	.172	.141
x18	.165	.559	.045	.315	.104	.240
x30	.320	.226	.746	.167	.223	.026
x54	.316	.335	.729	.044	.098	-.026
x29	.140	.146	.718	.325	.144	.228
x55	.269	.393	.618	-.183	.199	.076
x24	.225	.141	.607	.339	.188	.279
x48	.274	.224	.607	.110	-.091	.338
x16	.347	.261	.135	.740	.175	.080
x17	.225	.325	.266	.728	.104	.094
x4	.077	.239	.133	-.005	.736	.245
x2	.350	.152	.128	.254	.656	.015
x3	.294	.253	.311	.347	.456	-.009
x70	.276	.257	.166	.089	.184	.700
x69	.209	.350	.144	.019	.015	.617

* see items in Appendix 1
Factors are: DSO (Doctors' Service Orientation), Tangibles (Hospital), NSO (Nurses' Service Orientation), Tangibles (Staff), Access, and Procedures.

significant, is it appropriate to examine the dependent variables using ANOVA to test for significant differences.

Univariate F-tests ($F = 38.74$; $p < .001$) showed that the null hypothesis of no difference between the three groups for doctors' service orientation was rejected. Table 2 indicates that there is no difference in means on for doctors' service orientation (DSO) between the public and private sectors in Bangladesh, but they both were rated significantly lower than foreign hospitals. This finding suggests that users of the public healthcare system are not being underserved by doctors. This may be due the fact that many doctors employed in the reputed pubic sector hospitals also work in the private sector. However, private sector users who pay a premium to obtain better healthcare service may not be receiving value for their money. Also the finding that DSO obtained a significantly higher rating for foreign hospitals may explain why many patients are seeking services in foreign countries.

On nurses' service orientation (NSO), F-tests resulted in rejecting the null hypothesis ($F = 39.22$; $p < .001$). A comparison of the means indicated the existence of significantly different levels of service as perceived by patients. As posited, the foreign hospitals were rated highest on NSO, followed by private hospitals and then the public hospitals. While these differences may be attributed to a variety of factors including nurses' social standing, resources, training, incentives, etc., the quality of nursing in the country clearly has much room for improvement.

The strongest effect of the three types of hospital services was found on tangibles ($F = 183.82$; $p < .001$) as reflected in the hospital premises. We again see three distinct levels of perceived service on this dimension: the foreign hospitals scored significantly higher than the private hospitals while the private hospital were rated significantly higher than the public hospitals, the spread in the differences being the greatest on this construct.

TABLE 2
Significance Tests of Difference Between the Hospital Types

Variables	Mean Score (Public Hospitals)-a n = 152	Mean Score (Private Hospitals)-b n = 152	Mean Score (Foreign Hospitals)-c n = 94	ANOVA F-Value p < .001
Doctor Service Orientation	3.89[c] (.68)	3.99[c] (.56)	4.58[ab] (.49)	38.74
Nurse Service Orientation	3.70[bc] (.82)	3.94[ac] (.60)	4.48[ab] (.48)	39.22
Tangible (hospital)	3.06[bc] (.78)	3.92[ac] (.62)	4.67[ab] (.44)	183.18
Tangible (staff)	4.34[c] (.59)	4.35[c] (.57)	4.76[ab] (.44)	19.89
Access	3.86[c] (.77)	3.95[c] (.60)	4.63[ab] (.50)	43.71
Procedures	3.70[bc] (.73)	3.93[ac] (.55)	4.47[ab] (.58)	41.25

Note: Subscript a = significantly different from public hospitals
Subscript b = significantly different from private hospitals
Subscript c = significantly different from foreign hospitals

Receiving significantly lower ratings, public hospitals need to be more conscious of their physical surroundings and the level of cleanliness they maintain as an important component of service delivery. While maintaining a clean hospital environment requires resources, more importantly it needs a mind-set of its administrators who are apparently oblivious of the need to manage the upkeep and looks of the premises, including rest rooms (toilets), hallways, equipment and other tangibles. If this aspect of service delivery can be upgraded, patients could benefit from the potential healing effects of the surroundings (flower beds, a paint lift, clean facilities, etc.). Research is also needed to determine whether appearances of the public hospitals are consciously not upgraded to discourage the affluent and better paying patients from using them, the reason being they would avail service from the more expensive private hospitals.

Regarding the appearance of the staff (only doctors and nurses were considered in the measures), the null hypothesis was again rejected ($F = 19.92$; $p < .001$). The mean scores suggest that there is no perceived difference in the appearances of the doctors and nurses between public and private sectors. However, doctors and nurses in foreign hospitals obtained a significantly higher rating, a factor that may be playing a role, however minor, in attracting patients to these hospitals where they might perceive receiving better quality of service by "cleaner" looking staff.

On access, it was felt that private hospitals would be more accessible than private hospitals. The difference, however, was not significant. Upon reflection, this result may be a manifestation of the fact that the private hospitals are usually smaller in capacity and therefore have limited absorptive capacities or because all respondents were those who were discharged from the hospitals; clearly, they all had access. As for foreign hospitals, since they need to be contacted in advance they were seen as significantly more accessible.

Hospital procedures involve maintaining patient records and adopting proper patient release procedures to better serve the patients. In this regard, the means clearly indicate that the procedures in the three categories of hospitals are different: foreign hospitals are seen as much better, followed by private hospitals, and then public hospitals. In Bangladesh, generally, patients themselves are responsible for maintaining their own records. Consequently, if patients misplace the records, the service providers often lack information on their history that can lower the quality of service delivered. Often physicians may have to work with little or no information as patients are not trained to organize and maintain their medical records. This shortcoming may also prolong the time needed to treat patients as their history, likely to be flawed for memory distortions, is rebuilt painstakingly before the doctor can re-diagnose the condition and treat it. This is an important area in which regulations may have to be instituted, especially in the public hospitals, to preserve patient information in the service facility to serve patients better. Another option is to train patients to better maintain their records.

Conclusions

This study generally supports the contention that differences would be observed on perceived service quality between the three categories of "reputed" hospitals. Significant differences apparently exist on three out of six dimensions between public and private hospitals, while services provided by foreign hospitals are "always" perceived as better. We note, however, that despite the adversities faced by the public hospitals on funding, infrastructure, equipment, personnel, training, support services, drug availability, reward systems, etc., the selected hospitals scored better than expected on certain dimensions, matching the better reputed private hospitals on three out of six dimensions. One reason the two reputed public hospitals—Dhaka Medical College Hospital and Mitford Hospital—seemed to hold their own when compared to reputed private hospitals may be attributed to their long-standing image built over decades, dating to an era before the birth of Bangladesh in 1971.

In particular, we note no significant difference between doctors in the public and private hospitals. This may be because many doctors work in both places while nurses do not. There may also be an overall positive bias in the ratings of doctors because patients are evaluating the "exalted" doctor who provides specialized services on a salient issue (health) and generally belongs to a higher-status societal group. A final reason for the higher ratings may be attributed to the fact that the doctors rated were from the best hospitals in the country, suggesting that the best hospitals in the public and private sectors are really comparable.

As for the higher than expected ratings on other dimensions of service obtained by public hospitals, it may be argued that most service recipients in the country are not entitlement-conscious; they do not know their rights or how to demand or expect more from the health services and are generally content with whatever services they can get. By sensitizing them to the metrics identified in this study, the citizenry could be made more conscious of their rights to expect better. However, it remains to be seen in future studies whether patient perceptions "in general" about the public hospitals elsewhere in the country are as good as we found for the selected public hospitals.

Of particular note is that on "all" measures of service quality, foreign (mostly Indian) hospitals earned significantly higher ratings. These ratings may also reflect the evaluations of those who have experienced unsatisfactory services at the local hospitals. This, we believe, reflects why many are choosing to obtain health services abroad. If the attendant and growing outflow of foreign exchange for health care is to be stopped and possibly reversed, concerted efforts are needed at the policy level as well as at the service delivery level in the nation's hospitals. While we briefly touch upon several policy issues, the findings of the study are more amenable to service delivery at the hospital level. It suffices, however, to note that the two are interlinked.

At the policy level, thoughts must be devoted to two major factors: prevention and cure. Prevention involves multi-pronged strategies that involve intersectoral collaboration. For example, health issues must be more aggressively incorporated into the school curriculum from an early (primary education) stage, links must be established with information and communication sectors to bring about needed behavior changes in the general population, and the healthcare sector must be geared up to provide expanded preventive care (annual check-ups, immunization, etc.). On another level, life care must be addressed by policy makers to ensure a healthy physical environment free from air pollution, poor water quality, congested housing, population growth, and related factors. Social policies that ensure greater participation in the workplace, freedom from violence and abuse, etc. can also go a long way in promoting better overall health as the burdens and vicissitudes of life are ameliorated.

At the service delivery level, which is what this paper is about, we address service quality issues in hospitals and the needed standards for service delivery staff that would better ensure patient care. In fact, the service factors and their measures identified in this study reflect what is important to patients. Addressing them in judicious ways can help bring about important behavioral changes among the nation's hospitals to deliver better quality of services. In this regard, Myers (1993) and Bagozzi and Lee (2002) summarize earlier work on social influence theory and suggest that people conform to influence for two reasons: *Normative influence* gains conformity based on a person's desire to fulfill others' expectations, represented in norms or standards, often to gain acceptance. In other words, people tend "to avoid rejection, to stay in people's [those who set and evaluate standards] good graces, or to gain their approval" (Myers 1993, p. 246). By selecting standards and devising appropriate evaluation mechanisms, healthcare service providers can be shown whether and the extent to which they fulfill expectations and are in people's good graces.

Informational influence on the other hand suggests that people conform by accepting evidence about reality provided by other people, especially when that reality is ambiguous. In other words, if the evidence gathered from patients can show a different reality to healthcare providers (e.g., non-conformance to standards), it may again be possible to influence them to deliver better and more appropriate health services. According to Myers (1993), "concern for social image produces normative influence. The desire to be correct produces informational influence."

To best use the service quality metrics identified in this study, it is imperative for a lead agency to formulate a set of basic standards that incorporate the metrics to reflect the patient's voice. In the developed countries, such standards are tied to performance evaluations and are regularly used to rank or rate individuals, groups, and even organizations such as banks, mutual funds, insurance companies, etc. Similar procedures could also be used in Bangladesh and other developing countries to rank or rate hospital services. Based on the metrics identified, all hospitals (public and private) could be periodically evaluated and a system of ranking could be devised to place the evaluated hospitals in one of the following categories: platinum, gold, silver or bronze. This is easy for patients to comprehend and should be a valuable basis for them to make informed choices. Only an aware public can make the sector conform to established standards by avoiding poorly ranked hospital service providers. The evaluations

and rankings should be widely disseminated among the general public through information centers, public awareness campaigns, media participation, and a variety of accessible and well-illustrated literature. Conducted effectively and over time, such dissemination can help shape the behaviors of the healthcare providers, thereby serving as an important basis for the social control of healthcare delivery.

When patients have access to reliable information based on the shared evaluations, they will choose those healthcare providers that are better rated. Consequently, hospitals that earn poor ratings or rankings are likely to be stimulated to improve quality. The social consequences of being rated low should serve to foster a competitive environment for better ratings among the providers, especially when they are held up to public scrutiny. Also, when the evaluations are widely disseminated, their impact on the healthcare system should be reflected not only on patient satisfaction ratings but, eventually, also, on stemming or even reversing the level of foreign exchange outflows that are tied to patients seeking quality health care services abroad.

When the ratings are low and do not meet standards, hospital administrators must envisage and offer a variety of programs including training, supervision, incentives, and resource transfers so that skills are matched appropriately with needs. Hospitals that earn consistently low ratings should be targeted by regulatory agencies and penalized on certain privileges. For public hospitals this could include reduction in allocations for capital projects, bonuses, training budgets, etc. For private providers, cancellation of privileges and licenses, closure of their practices and barring them from practice should not be ruled out. If a national capability for standard-setting, continuous evaluation and wide dissemination of information can be firmly established, the overall quality of hospital services in the country should improve rapidly.

In conclusion, it must be said that even though the ratings obtained in this study for public and private hospitals are not quite stellar, given the tremendous adversities under which they function in Bangladesh, especially in the public sector, the ratings are commendable. Consequently, where low ratings are obtained, the numbers may be used initially for development instead of punitive purposes. In fact the external evaluations must be matched with proper resource allocation and managerial practices to ensure that the hospitals are fully functional and that the service providers are properly hired, trained, empowered, supported, evaluated, and rewarded to motivate them to provide the best service possible. Unless the right internal systems are in place, external evaluations and pressures thus generated will bring about few needed changes. To this end, two additional components are essential: a systematic approach to service research in this sector and the introduction of healthcare administration as a separate field of study. Incorporating these elements and ideas in the total scheme of healthcare service delivery can be instrumental in devising a health care system that is competitive, innovative, futuristic, and able to deliver what the best hospitals in neighboring countries are able to deliver. The long term gains are likely to be substantial: improved services, higher patient satisfaction, reversal of the outflow of foreign exchange and, perhaps even, the establishment of a healthcare system that can attract patients from abroad that can serve as a foreign exchange earner to contribute to economic growth and development.

Acknowledgements

The author acknowledges the help received from Nazlee Siddiqui of North South University, Shahjahan Khandakar, Mustak H.M. Iftekhar, Shamim Ara, Ahmed Mustafa, and Abdul Hamid Moral from the Health Economics Unit of the Ministry of Health and Family Welfare in Bangladesh, and Farah Famida, who organized the data collection effort with her team of undergraduate students at East West University, Bangladesh.

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Syed Saad Andaleeb
Professor and Program Chair of Marketing
Sam and Irene Black School of Business
The Pennsylvania State University
5101 Jordan Road, Erie, PA 16563
814-898-6431 (ssa4@psu.edu)

APPENDIX 1
Constructs and Items measured on five-point Likert scales

DSO:
X50: Doctor was willing to answer any question.
X45: Doctors explained the purpose of the diagnostic tests.
X46: Doctors explained the test results.
X44: Doctor gave clear advice to patients about the prescriptions. .
X51: Doctor listened to you attentively.
X53: Doctor was caring.
X39: Doctors provided logical answers to questions about my condition.
X52: Doctor appropriately discussed your previous condition.
X40: You felt safe in the hands of the doctors.
X31: Doctors attended to you sincerely whenever needed.
X38: Doctors were competent in diagnosing the problem.
X23: Doctors regularly followed up on the treatment regularly.
X25: Doctors provided correct treatment the first time.

NSO:
X54: Nurses were caring.
X30: Nurses attended to you sincerely when needed.
X29: Nurses were quite willing to respond when needed.
X48: Nurses communicated patients' needs to doctors.
X55: Nurses gave individual attention to patients.
X24: Nurses administered treatment in a timely manner.

TANGIBLES (Hospitals):
X6: Hospital was visually appealing.
X10: Cabin/Ward, bedding and floors were clean.
X19: Toilets and bathrooms were clean.
X7: Hospital premises were neat and clean.
X9: Healthcare centers had modern equipment.
X18: Operation theatre and instruments were clean.

TANGIBLES (staff):
X16: Doctors were clean in appearance.
X17: Nurses were clean in appearance.

ACCESS:
X4: It was easy to get a bed/cabin.
X2: Hospitals had adequate number of doctors.
X3: Hospitals had adequate number of nurses.

PROCESS:
X70: Documentation and recording system was organized.
X69: Patient release procedure was carried out properly.

Estimating 'Best Practice' in Private Medical Clinics in Bangladesh: A Case for Changing Managerial Practices to Improve Efficiency

Mohammad A. Rahman

Abstract

This essay makes an effort to estimate the level of technical inefficiency of private medical clinics in Bangladesh, identify factors that may hinder efficiency, explore the potential cost-savings by eliminating inefficiencies and suggest policy measures to institute 'best practice' protocols to enhance performance. The paper points out how efficiency in the health clinics can be improved through changes in managerial practices.

Introduction

Bangladesh faces a challenging task in the coming years to provide adequate health care for its people particularly for inpatient medical care that requires colossal investment and availability of adequate health care professionals (World Bank, 2001). In the last two decades, the number of for-profit medical clinics in the private sector has grown manifolds to meet some of the increasing demand. From a handful private medical clinics that existed in 1982, it has increased to 584 in 1997 (Kawnine, 1999) and reached 790 by 2003 (HEU, 2003). This important sector in the health care delivery system has received little policy attention in Bangladesh. Although the private inpatient medical clinics are perceived to have increased access and quality of service to a certain degree (Andaleeb, 2000), not much is known about the organizational and managerial characteristics of these clinics and how it affects operational efficiency.

As Bangladesh makes stride to achieve a much improved health and medical care system in the new millennium, it is important to understand how well they are performing. Insights into this matter can shed light on the sources of inefficiency and help suggest a 'best practice' benchmark that can improve operational efficiency in the medical clinics. The issue of efficiency is particularly important because it can identify whether resources are utilized properly leading to possible cost savings or increased productivity. It can benefit the private clinic owners to optimize production or service level by adjusting resource use and redesign management procedures.

The objective of this study is to estimate the level of technical inefficiency of private medical clinics in Bangladesh, explore their potential cost-savings by eliminating inefficiency, identify factors that may hinder their performances, and suggest policy measures to institute a 'best practice' standard to enhance efficiency. Key clinic characteristics that are included in the study comprise of factors such as clinics' size, years in operation, accreditation and ownership. The literature dealing with the effects of these characteristics on the behavior and performance of hospitals and clinics in the developed nations is quite extensive. Although not reviewed here, it requires mentioning that the literature records considerable variation on how each of the characteristics affects hospital performance (for some overview discussions, see Barnett & Carroll, 1995). A review of the literature did not identify any rigorous efficiency analysis of inpatient for-profit medical clinics in Bangladesh. The research questions addressed in this study are as follows: What is the extent of technical inefficiency among the for-profit medical clinics in Bangladesh? What organizational, clinical management and environmental factors contribute to and explain the inefficiency?

While designing the study, a number of approaches for estimating efficiency were considered, including ratio analysis, stochastic frontier models or cost function approaches (Rannan-Eliya and Somanathan, 1998). Finally, an innovative technique that simultaneously takes into account multiple outputs and inputs in the computation of overall levels of efficiency was adopted for use in this study. That technique, called data envelopment analysis (DEA), is discussed further in the next section.

Application of Data Envelopment Analysis in Measuring Efficiency of Clinics

Measurement of efficiency of a health care production facility such as a clinic that uses multiple inputs and generates multiple outputs is complex and comparisons across units are difficult. DEA, developed by Charnes, Cooper, and Rhodes (1978), is a non-parametric approach to measure efficiency in such situations. It is a tool in which linear programming is used to search for optimal combinations of inputs and outputs, based on the actual performances of these units - in this case

clinics. It involves identification of units, which in relative sense uses the inputs for the given outputs in the most optimal manner; DEA uses this information to construct an 'efficiency frontier' over the data of available organization units. This 'efficiency frontier' is then used to calculate the inefficiencies of the other organization units that do not fall on the efficient frontier and thus providing information on which units are not using inputs efficiently.

There are numerous examples of how DEA has been successfully applied to the study of health care organizations. In spite of availability of other techniques for measuring efficiency, DEA is reportedly becoming the researchers' method of choice for finding best practices and evaluating productive inefficiency in health care organizations (Chilingerian and Sherman, 2004). Papers by Sherman (1981, 1984) and Nunamaker (1983) were among the first to apply DEA measures to the study of hospital departments and nursing homes respectively. Ozcan and Luke (1993) evaluated ownership, size and payer mix affects on efficiency using DEA and Huang and McLaughlin (1989) applied DEA to rural primary health care programs. Together, these studies show that DEA is an effective technique for evaluating the efficiency of health care providers with varying input mixes, types and numbers of outputs.

The main advantage of DEA is that being non parametric, it is free from specification error like that of stochastic frontier models or cost function approaches. It also allows for taking into account environmental and non-discretionary variables that are beyond management control (Campinell 2003). It is a very useful tool to get insights about the management problems or decision choices underlying efficiency relationships such as the magnitude of slack, scale effects of certain outputs on the productivity of inputs, marginal rates of substitution and transformation (Cooper and Tone, 2000). Zhu (2000) pointed out the possibility of using DEA to estimate potential input savings based on a proportional reduction of inputs. DEA can also help benchmark 'best practice' by creating a theoretical production possibility set from a group of providers that has been marked efficient or inefficient (Chilingerian and Sherman, 2004). One problem with DEA is that it is deterministic in nature and attributes the entire residual to inefficiency. But there are no absolute proofs as to whether DEA should be preferred over statistical methods or vice versa; researchers examining efficiency in different areas have reached different conclusion as to their preferred methods (Giuffrida, 2001).

The DEA literature focuses on the two basic models for measuring and accounting overall technical and scale efficiency, namely the CCR model and the BCC model. The CCR model was named after the developers Charnes, Cooper and Rhodes (Charnes, 1978) and the BCC model named after their developers Banker, Charnes and Cooper (Banker, 1984). The CCR model measures technical and scale inefficiency combined together and assumes constant returns to scale. The BCC model on the other hand assumes variable returns to scale and measures pure technical efficiency that can be used to separate technical from scale efficiency. Cooper and Zhu (2004) demonstrates the mathematical models showing how a DEA program computes efficiency scores for a) output maximization and b) input minimization.

A score equal to 1 implies that observed and potential performance coincides indicating a 'best practice' or efficiency. In the cases where efficiency score is less than 1, it is implied that the observed performance of the DMU is lower than the potential indicating relative inefficiency.

a.) Output Maximization

$$\text{Max } h_o(u, v) = \sum_r u_r y_{ro} / \sum v_i x_{io}$$
$$\text{Subject to: } \sum_r u_r y_{rj} / \sum v_i x_{ij} \leq 1 \text{ for } j=1,\ldots..n$$

b.) Input Minimization

$$\text{Min } h_o(u, v) = \sum_r u_r y_{ro} / \sum v_i x_{io}$$
$$\text{Subject to: } \sum_r u_r y_{rj} / \sum v_i x_{ij} \geq 1 \text{ for } j=1,\ldots..n,$$

Where u_r and v_i are the variables and y_{ro} and x_{io} are the observed output and input variables of a decision making unit (DMU_o). and $u_r, v_i \geq 0$ for all i and r.

Data and Methodology

Data

Data for this study is drawn from a countrywide survey on private medical clinics in Bangladesh conducted by the Health Economics Unit (HEU) a research wing under Ministry of Health and Family Welfare (MoHFW). The *HEU Private Medical Clinics Survey*, as it is known, is the only nation-wide facility level survey conducted in Bangladesh on inpatient medical clinics in the private sector. The survey was conducted in 1998 and made available for use in 2000. The dataset contains 252 clinics chosen through a stepwise random selection procedure (cluster sampling). Information was then gathered on available facilities, the number of staff, patient-

turnover by various departments, and financial and other issues about the clinics.

The input and output variables of the clinics used in the DEA model has come from this database. The data for the organizational, management and clinical characteristics of the clinics also came from this HEU dataset. There are some control variables, the data for which have come from several other sources. The income measure, population, and rural-urban location information have been gathered from publications of the Bangladesh Bureau of Statistics 1998.

Variables

The variables used in this analysis were considered after careful review of similar studies conducted using DEA. It is worthwhile to note that the literature shows a wide diversity in the manner these variables have been selected for a DEA analysis. Butler (1995) notes that the output can either be, i) a measurement of the improvement in health status as a result of the treatment (e.g., Quality Adjusted Life Years) or ii) the actual treatment itself. Banker (1986) used seven categories of inpatients days of treatment and two categories of outpatient days of treatment when accounting for output measure. Grosskopf (1987) disaggregated outputs by types of treatment: acute, intensive care, number of surgeries and emergency visits. Athanassopoulos (2001) took into consideration four primary treatment categories in the absence of case mix, case-severity and quality of care information namely, a) numbers of medical patients b) number of surgical patients, c) medical exams and d) laboratory tests.

In the matter of adjusting for case mix, it is observed that various studies of hospital efficiency have employed alternative methods to deal with the problem of absence of case mix and case severity data. In the pioneering study of hospital efficiency using DEA, Sherman (1986) took into consideration 'age' as the case mix variables. Chilingerian (1995) used 'mean age' of physician's patient mix data in analyzing physician performance in a single hospital. Banker (1986) also categorized outputs on the basis of patients' age. It is argued that the most successful approach for obtaining the final output of hospital inpatient care is DRG classification system[1] that takes case mix of the hospital into account (Linna, 1999). But Roskow and Chilingerian (1999) reported that the incremental impact of adding a severity of illness variable to an equation with a case mix was minimal. In Bangladesh, such case mix classifications or illness severity information, are not maintained by clinics, hospitals or any government agencies. This is not surprising because most health care expenditures are out of pocket expenditures and health insurance scheme that would need such information is almost non-existent (Kawnine, 2003). The selection of medical clinic outputs for this study is based on three main generic inpatient treatment days (medical, surgical and ob/gyn) and two outpatient days (outpatient visits and emergency care). In order to build a more accurate representation of hospital outputs, the final outputs are adjusted for age and gender to account for case mix.

Clinic Inputs and Outputs. In this study, the clinics were assumed to be producing four types of output: Medical Inpatient Days, Surgical Inpatient Days, Ob/Gyn Inpatient Days, Outpatient Visits and Emergency Visits that captures the major outputs of the clinics. Although the clinics may produce other types of outputs (such as community services), they were not included in this study because of unavailability of data.

There were six types of inputs that were included in the computation of efficiency scores: Beds, FTE Physicians, FTE Nurses, FTE Staff, Capital expenditure and Other Supplies. There are inputs that are consumed by the clinics, but it was assumed that the factors included in the computation represent the major factors used in producing the outputs.

The hospital output measures included were:

- Medical Inpatient Days: Number of inpatient days for medical care
- Surgical Inpatient Days: Number of inpatient days for surgical care
- Ob/Gyn Inpatient Days: Number of inpatient days for ob/gyn care
- Outpatient Visits: Number of Outpatient Visits
- Emergency Visits: Number of Emergency Visits

The input measures included were:

- Beds: Number of functional hospital beds
- FTE Physicians: Full Time Employed Physicians
- FTE Nurses: Full Time Employed Nurses
- FTE Staff: Full Time Employed Non-clinical staff
- Capital expenditure: Fixed Costs including capital expenditure
- Other supplies: Variable costs including medical & other supplies

Explanatory Variables. Clinics in Bangladesh operate in highly variable local contexts[2] and significant differences exist among rural areas, district towns and major cities. Some differences that may impact a clinic's relative levels and patterns of performance include, market share or level of competition and other socio-demographic factors. The three main categories of explanatory variables that were used in this study are: organizational variables, clinical-management variables and environmental variables.

The variables related to clinic's organizational capacity included were,

- Ownership (whether owned by doctor or non-doctors)
- Accreditation (whether it has government registration from Directorate of Health)
- Experience (number of years in business)

The clinical-management variables included in the study were,

- Structural Quality[3]: Structural Quality Index
- Size: No of beds
- Capacity utilization: Occupancy rate
- Input allocation: Physician/bed, nurse/bed, staff/bed
- Labor intensity: Nurse to physician and staff to physician ratios
- Length of stay: Number of days spent in the clinic

The use of the 'size' measure in both computing the efficiency scores and as an explanatory variable is a standard practice in similar studies and is argued that it does not produce a tautology since its true value is submerged in the computation of DEA scores, which are based upon interrelationships among the input output factors and not on their absolute values per se (Ozcan, 1993).

The environmental variables included in this study were,

- Location (Rural or Urban) Rural=1 Urban=0
- Market share (level of competition): Herfindahl Index for industry (hospital and clinics) concentration
- Age of Patients

Analysis Technique

The analysis was completed in two stages[4]. First, the clinics were ranked on the basis of their technical efficiency scores derived from the application of the DEA models. In the second stage, these scores were regressed on the explanatory variables that may influence the efficiency of the clinics by using a Tobit regression analysis. Since DEA scores consists of both discrete and continuous parts (efficient clinics have a score of 1 while inefficient clinics have score <1), standard multiple regression was likely to lead to biased estimates. A censored regression model like Tobit was thus suggested since it can best conceptualize the nature of the dependent variable of the efficiency scores derived from DEA[5]. For computational purpose in Tobit, the DEA efficiency scores need to be normalized to have a censoring point at zero. The efficiency scores were thus transformed so that the fully efficient clinics could be constrained at zero while the inefficient clinics had scores greater than zero. The formula for the transformation is shown below:

Inefficiency score = (1/DEA score) - 1

This transformation of the dependent variable also reversed the signs of the co-efficient in the regression. As a result, a negative coefficient now indicated a positive association with efficiency while positive coefficient meant negative association with efficiency. The coefficients were interpreted similarly to that of OLS regression. Significance of the equation was determined by the log likelihood function, which has a chi-square distribution with degrees of freedom equal to the number of explanatory variables.

In order to select the variables to be included for the final regression models some test regressions were conducted and the variables that never achieved significance were excluded. The organizational variables that were finally included in the analysis are, 'accreditation', 'experience' (the number of years in operation) and 'ownership'. Among the clinical-management characteristics the variables that were included are, ' structural quality', 'occupancy rate', 'length of stay', 'nursing capacity' and 'nurse to doctor ratio'. The control variables that were included in the final regression model comprised of environmental variables such as 'location' and 'market share' of the clinics and a case mix variable - 'patients' age'.

The dependent variable used in the regression was the transformed DEA scores of the clinics. Thus, the clinic 'inefficiency' scores were regressed on the explanatory scores in the Tobit analysis. Out of the 254 clinics that were included in the data set only 202 were included in the analysis. Clinics that had similar outputs in terms of diagnostics were included for analysis. This is because DEA assumes that a model is assessing efficiency of comparable units and not product differences. The clinics that did not have outpatient services were left out of the analysis in

order to ensure that clinics with different organizational and management practices were not included.

An important prerequisite of analyzing efficiency through DEA is that there needs to be isotonicity among the variables used in the DEA models. This implies that an increase in input will result in increased output. One process of checking the isotonicity can be done by conducting a correlational analysis of the input and output variables used in the DEA model. A positive relationship between input and output variables was confirmed.

Results

Level of Inefficiency in Clinics

Table 1 shows the input and output variables used in the DEA analysis. On average, the medical clinics in Bangladesh were rather small in size with a bed capacity of only 18 beds per facility. The average number of doctors per clinic was 4 and that of nurses was only 6.5 depicting a doctor to nurse ratio of only 1:1.6. This number is lower than the standard set by the Directorate of Health under the Ministry of Health and Family Welfare as per the private clinics ordinance[6] of 1982.

On the output side, it is apparent that the total number of surgical inpatient days (2685) was the single most significant output which was more than double the number of medical inpatient days (1284) and 12 times that of ob-gyn inpatient days. The average outpatient visits was about 362 per clinic.

Table 2 shows the mean, median and standard deviation of the DEA production models. The CCR model shows both technical and scale efficiency while the BCC model shows pure technical efficiency. The mean efficiency score in the CCR production model was .712, indicating that on average the clinics were operating at less than three fourth of its capacity. The most inefficient clinic is found to have an efficiency score of only .293. The mean efficiency score in the BCC model was .798 with the most inefficient clinic having an efficiency score of .294.

It is possible to project potential savings and increased output gains of the clinics by using the output from the CCR model's linear programming formulations and the slack for the inefficient clinics. The idea is to project the gains if all 171 inefficient clinics were to act as the 31 fully efficient clinics. The result from such computation is shown in Table 3.

Table 1: Summary of Input and Output Measures of Factors used in the DEA Model

Inputs	*Mean*	*Standard Dev.*	*Outputs*	*Mean*	*Standard Dev.*
Beds	18.2	10.8	Outpatient	362	287.8
Doctors	4.1	2.7	Medical Inpatient Days	1284	1498
Nurses	6.5	4.7	Surgical Inpatient Days	2685	1847
Staff	30.0	20.7	Ob-Gynecology Inpatient Days	208	206

Table 2: Summary of DEA Mean[1] Efficiency Scores – Production Model

	Mean	*Std.Dev.*	*Median*	*Minimum*	Maximum
CCR Model (Technical & Scale Efficiency)	.712	.191	.681	.293	1
BCC Model(Technical & Scale Efficiency)	.798	.185	.819	.294	1

[1] Gives the censored distributed means

Table 3: DEA Estimating of Potential Savings: Projection from the efficient frontier of Production model

Inputs and Outputs	*Increase in Outputs*	*Reduction in Inputs*
Outpatient	14386.1	-
Medical Inpatients	978.4	-
Surgical Inpatients	2844.8	-
Ob-Gyn Inpatients	6404.55	
Beds	-	1145.99
Doctors	-	406.22
Nurses	-	600.24
Staff	-	2745.4

Table 4: Results from Tobit Regression Analysis – BCC Production Model

Variables	*Tobit Regression for DEA Production Model Control Variables Only*		*Tobit Regression for DEA Production Model With All Variables*	
	Coefficient	T-Ratio	Coefficient	T-Ratio
Constant	.1794028	0.72	1.436598	4.60
Control Variables				
Location	.0181879	0.26	.007065	0.11
Market Share	-.0070893	-1.80*	-.0012819	-0.40
Age of Patients	.0093729	1.61	0034307	0.72
Organizational Variables	-	-		
Accreditation	-	-	.0152499	0.19
Experience	-	-	-.0045915	-0.67
Ownership	-	-	-.0084866	-0.14
Clinical Management Variables				
Structural Quality	-	-	.1915223	3.77**
Capacity Utilization	-	-	-.015089	-8.53***
Nursing capacity	-	-	-.0311503	-2.69**
Length of Stay	-	-	-.0831543	-2.31**
Nurse/Doctor Ratio	-	-	-.0804843	-2.71**
	Chi2 = 5.57* df = 3		Chi2 = 108.39** df = 11	

*= significant at the .10 level, two tailed test
**= significant at the .05 level, two tailed test
***= significant at the .01 level, two tailed test

The findings show a remarkable effect when all the clinics in the analysis were considered to be functioning as fully efficient entities. About 1146 beds, 406 doctors, 600 nurses and 2475 staff could be reduced while treating 14386 more outpatients, 2844 more surgical patients and 6404 more ob-gynecological patients. The reductions represent about 30 per cent of the existing beds, 48 per cent of all the doctors, 46 per cent of the nurses and 45 per cent of the staff at the clinics. On average, this translates into reducing 17 beds, 4 doctors, 6 nurses and 30 staff per clinic.

Factors Affecting Efficiency

The findings from the Tobit analysis are shown in Table 4. The first regression analysis included only the control variables and only 'market share' was found to be significant ($p<.1$). The chi square value of 5.57 with 3 df. was found to be significant indicating that the model explained significant share of variation in inefficiency among the clinics.

The organizational characteristics of the clinics were not found to have any impact on efficiency. The

analysis showed that factors such as 'ownership', 'accreditation' and 'experience' (or years in operation) did not affect production efficiency of the clinics. When included in the model, the control variables – 'location', 'market share' and 'age of patients' were also found to have no impact on production efficiency.

Discussion and Conclusions

This study analyzed an important but overlooked issue in Bangladesh's health care provision system in terms of estimating inefficiency of for-profit inpatient medical clinics and understanding the factors that affected efficiency. The DEA analysis revealed some useful insights to the medical clinic sector's performance. Measured in terms of inefficient use of scarce resources or in terms of missed opportunities to provide additional services to potential patients, the production efficiency scores obtained from the DEA model indicates that there is a substantial cost of inefficiency among the clinics in Bangladesh. Although there were wide variations in technical efficiencies among the clinics, it was found that on average clinics operated at 71 per cent of their efficiency level. Only 15 per cent of the clinics in the sample were found to be operating at the fully efficient level on the frontier. If all the clinics were considered to be operating at fully efficient level, the potential reduction in inputs used could be as much as 1146 beds, 406 doctors, 600 nurses and 2475 staff. On the other hand, if the excess capacity from inefficiency could be utilized, an additional 14,000 outpatients, 1000 internal medicine patients, 2800 more surgical patients and 6400 more ob-gynecological patients could be treated annually. One explanation for this phenomenon may be the lack of a coherent clinical-management standards practiced within the clinics.

This finding also points out two possible implications of the existing policies postulated by the Directorate of Health under Ministry of Health and Family Welfare, which has been followed since 1982. First, the current rules and procedures as suggested by the DG Health is inadequate and may have become quite obsolete in addressing clinical and managerial aspects of efficient administrative practice in the clinics. Secondly, the inefficiency may stem from the fact that the enforcement of the existing rules and procedures is either lacking or ineffective at best. This suggests that it is important for policy makers to revisit the existing guidelines and procedures in the light of evidence-based research and modern managerial and clinical practices.

The analysis has also generated interesting finding regarding the relationship between medical clinics' characteristics and relative technical efficiencies. The findings from Tobit regression analysis suggest that there are several operational issues that the clinics need to address in order to improve their technical efficiency and performance. It is observed that by employing more nurses per doctor and per bed, the clinics may be able to increase their efficiency. This finding, in the backdrop of a nurse shortage in Bangladesh, leads to the conclusion that major efforts should be made to expand nursing education in order to increase the supply of nurses in Bangladesh. In this respect it is important to eliminate the barriers to nursing education that persists in our health service education system.

One way out of this problem is by supporting the private sector to set up more training institutes for nurse education. Collaboration with institutions from outside the country for nurses' training can also be very useful. Such training needs to maintain high standard training curricula that emphasize effective management capacity building. In light of shortage of nurse trainers who are well versed in management training, bringing in visiting instructors from overseas can also be encouraged. The use of world-wide-web can also be a useful method to conduct overseas correspondent courses. However, this requires that the government's ministry of education approves of such training methods. Apart from increasing the supply of nurses in the health care market, it is important to make sure that the clinics would be willing to pay the nurses a higher salary that can make nursing profession more attractive. Under the status quo, the clinics are able to operate without employing adequate nurses. A more strict enforcement of the law can lead to higher wages for the nurses and thus attract more entry into the market.

Not surprisingly, the study finds that 'capacity utilization' and 'length of stay' is positively associated with efficiency. It shows that if clinics run close to full capacity it is more likely to be perform at an efficient level. The study also determined that clinics that possessed higher standard in terms of 'structural quality' were more likely to be inefficient. In other words, clinics that possessed excessive hotel features and had multiple departments such as pharmacies, laboratories, and other auxiliary branches, were operating at less than efficient level. One explanation for this may be that a more complex operational system might be more prone to bureaucracy and inertia in the management practice, which may prevent clinics from performing at their

efficient levels. On the other hand, clinics with basic hotel features and few auxiliary departments are likely to have a more simple and streamlined management system and thus perform better.

So based on this study, what characteristics would highlight the 'best practice' model for medical clinics in Bangladesh? It appears that clinics need to focus on a number of aspects of clinical-management practices. First, clinics attaining 'best practice' have more nurses attached to each bed and also assign more nurses with every doctor on duty. The clinics' management also ensures simplicity (and thus less bureaucracy in operations) by being cautious on allocating excessive resources for auxiliary services and hotel features that may make them less productive. The management in 'best practice' clinics tries to ensure that they operate close to capacity and ensure that the patients receive full care from their facilities rather than being transferred to another health care provider.

It is recommended that clinics should institutionalize professional management practices. For that matter, it is suggested that the government should mandate the clinics to employ professionals with knowledge and expertise of management in healthcare services. However, the health care industry faces acute shortage of personnel with such qualifications. Therefore, it is quite important that healthcare service and management trainings are in place and supply of such qualified workers are ensured before any mandate on professional requirements in clinics are imposed. One way of ensuring supply of qualified healthcare managers is by offering health care management degrees and certificate courses for individuals who want to hold management positions in medical clinics. In this respect it needs to be mentioned that there is a substantial lack of health care management education in Bangladesh. There are only handful institutions[7] that offer courses in health care management and related subjects. If clinics are required to employ health care managers as a condition for their accreditation it is suggested that health care management courses are offered at more educational institutes.

It is further recommended that an 'independent' institution[8] be set up which will be responsible for assessment and accreditation of the medical clinics. This institution would set the standards of health care delivery and practice regulations taking into considerations the realities of Bangladesh while ensuring that appropriate 'labor-mix' and 'input-mix' are adopted by clinics' management.

In conclusion, it needs to be emphasized that this exploratory and pioneering study makes an important contribution to the limited knowledge base of information about inefficiency in the medical clinics sector in Bangladesh. It is an important first step in making policy makers aware of the extent of inefficiency that exists in this sector and the potential gains in services that can be realized if appropriate steps are taken. It identifies several factors, including shortage of nurses and injudicious and complex management practices that may be responsible for causing inefficiencies. It also needs to be acknowledged that more information and research (quantitative and also qualitative) is required in order to supplement the conclusions drawn from this study. Further research needs to be carried out to understand the level of appropriate labor mix and input mix to impact efficiency, which will provide further insights in an effort to understand how to optimize resource allocation by the clinics for efficiency gains.

Acknowledgements

The author acknowledges the support of Professor John Chilingerian (Brandies University, Mass.) for his valuable support in DEA analysis.

Endnotes

1. Diagnosis-related group (DRG) is a system used since 1983 to classify hospital into one of approximately 500 groups developed for Medicare as part of the prospective payment system. DRGs are assigned by a "grouper" program based on diagnoses, procedures, age, sex, and the presence of complications or co-morbidities.

2. Dhaka, the capital city is a metropolitan area that has a census in excess of 8 million, has over more than 300 clinic and hospitals that range in size from 10 to over 500 beds and exhibit wide differences in service mix and populations served. Rangpur, a district town on the other hand, is a district town with a much lower population and has only a handful of hospitals and is also set in a highly rural environment.

3. This refers to an index created based on the availability of various clinical auxiliary services at the clinics such as radiology, laboratory, pharmacy, operation-theater, etc. It is theorized that a higher score in structural quality index or increased availability of these auxiliary departments would constitute enhanced service

productivity, which in turn would enhance efficiency (Shortell 1994).

4. This procedure was first introduced by Chilingerian (1995).

5. Chilingerian (1995) notes, "a censored Tobit model fits a line which allows for the possibility of hypothetical scores > 1. The output can be interpreted as 'adjusted' efficiency scores based on a set of explanatory variables strongly associated with efficiency."

6. The 'Medical Practice and Private Clinics and Laboratories Ordinance, 1982' was promulgated to encourage the growth of health-care service delivery in the private sector. It lists the standard input requirements and authorizes the DG Health to issue operating licenses and yearly inspections of medical clinics.

7. At present only two universities offer a few health economics course for about 30 students per year.

8. This institution can be a comparable institution to JCAHO (The Joint Commission on Accreditation of Healthcare Organizations) which is a voluntary, nongovernmental organization and establishes standards for the operation of hospitals and nursing homes in the United States.

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Mohammad A. Rahman, Ph.D.
Assistant Professor,
Department of Public Health
College of Health and Human Services,
California State University, Fresno
2345 E. San Ramon Ave., M/S:MH30
Fresno, CA 93740
mrahman@csufresno.edu

To What Extent Can Primary Sector Producers in LDCs Move Up the Global Commodity Chain? A Case Study on the Bangladesh Shrimp Industry

Nazia Habib-Mintz

ABSTRACT

This article analyzes the effects of health related regulations from the Western buyers on Bangladeshi shrimp industry (e.g HACCAP) and ongoing national attempts to modernize the industry. To what extent can primary sector producers in least developing countries move up the global commodity chain? In response, this article argues, considering that the largest portion of the Bangladeshi shrimp chain is characterized by low-skilled labour, disorganization, and informal structure which is operating in a weak political and regulatory environment, any changes increase transaction costs and lower income effects. This leads to market diversions, price erosion, manipulation and long-term momentum loss for actors in the value chain.

Introduction

Trade liberalization, loosely termed as a move towards freer trade through the reduction of tariffs and other barriers, is generally perceived as the major force driving globalization, improved allocation of resources, and consequent gains in productive efficiency leading to economic growth and development (Krueger 1990, 1998). Critics point to a "race to the bottom" in developing countries with respect to employment conditions, de-industrialization, marginalization, and degradation of natural resources (Kohli 2004, Singh 2002). In this context, the impact of trade liberalization on primary commodity sectors is particularly significant for the economic development of producing and exporting developing countries.

Pro-market liberalization and industrialization literature argue that "producers, exporters and importers alike have adequate incentives to maintain minimum quality standards" to maintain their market competitiveness (Gilbert and Tollens 2002:4). Contrary to conventional wisdom, Singh argued that the intensity of competition in developing counties is certainly no less than that observed in advanced countries and that maximum competition is not necessarily optimal in terms of dynamic efficiency and maintaining quality standards (2002). Similarly, Abramovitz argues that "the institutional and human capital of social capability develop only as slowly as education and organization respond to the requirements of technological opportunity and to experience in exploring it….Further, the pace of realization of a potential for catch-up depends on a number of other conditions that govern the diffusion of knowledge, the mobility of resources and the rate of investment" (1989:405-406). Catching or moving up means technological upgrading, improved value chain (VC) governance structure, and increased industrial growth rates.

The conditions for growth and development do not solely depend on incentives, rather on the design and implementation of domestic policies on industrialization and competition, as well as the social security to do business. Empirical evidence suggests that policies are exogenous and endogenous at the same time (Ocampo et al. 2007). In developing countries, pressure from external policy requirements often yield quick domestic policies fixes that increase levels of economic vulnerability in the long run (ibid, Rodrik 2003). As a case study, this article analyzes to what extent Bangladesh's shrimp industry can move up the global commodity chain (GCC), which starts with poor, rural farmers and ends on the tables of western consumers.

Since market liberalization in the 1980s, the Bangladesh shrimp sector grew from insignificance in the early 1970s to now ranking among the top ten shrimp exporters globally. It is the country's second largest export industry after garments, contributes US$ 270 million annually to Bangladesh's economy, and is a major employer of the poor (UNEP 2004). Eighty percent of the economic actors in the value chain are small-medium enterprises (SMEs) living in poverty (GoB 2004). Poverty is not simply a low income or economic inequality, but rather as "a serious deprivation of certain basic capabilities" and rights to improve (Sen 1999:30, Abramovitz 1989). This article considers poverty as a corner piece in the equation to analyze to what extent Bangladesh can move up the GCC.

The industry is at the crossroads of globalization, where trade liberalization brought livelihood to poor shrimp farmers, but also increased their insecurity by subjecting them to price distortions and non-tariff barriers. Health and food safety agreements like

Hazard Analysis and Critical Control Point (HACCP) under the auspices of the World Trade Organization's (WTO) Agreement on Sanitary and Phytosanitary measures (SPS) critically determine producing countries' agro-industry development because deviations from the standards can have serious economic impact (see UNEP 2004, Jha 2005, Stiglitz and Charlton 2005). For example, Bangladeshi shrimp exports to the European Union (EU) were banned for three months in 1997 for non-compliance with HACCP regulations. The immediate financial cost was US$ 15 million, later estimated with continuing adjustment costs at US$ 65.1 million (Jha 2005:43; IFPRI 2003a).

The ban was not an isolated incident. Cumulative financial and reputational losses changed the business environment and social practices around shrimp farming. Instead of industrializing, the industry seems to be moving backwards. Only 30 out of 124 shrimp export factories are in operation, on average utilizing only 18-20% of operating capacity due to inadequate raw shrimp inputs (Muir 2003). Seventy five percent of exported shrimps are inland cultured, which are still cultivated in traditional technique (Khatun 2004) using low quality, and often contaminated, imported shrimp fry and feeds. Furthermore, the VC stretches from exporters operating in the formal economy to rural farmers in the informal economy. Institutional weakness marginalizes the government's ability to enhance competitiveness by moving up the GCC, to boost productivity via intensive farming, and to promote growth. The majority of actors in Bangladesh's VC still have little to no comprehension of HACCP requirements.

This paper argues that domestic institutional weakness gives Bangladesh little leverage over primary commodity export markets' requirements. SMEs constitute the largest portion of the VC hereby characterized by low-skilled labour, disorganization, and informal structures. Attempts have been made to meet international standards, but trade policies rooted in neo-liberal economics neglect local socio-economic, political, and institutional conditions, thereby failing to create adequate incentives for the predominantly poor VC actors to comply with buyer-driven regulations. Adjustment costs discriminateagainst the poor, manifesting in market diversions, price erosion, and long-term momentum loss. This article aims to be a starting point for designing an efficient coordination system between economic and social authorities, in which social objectives are effectively mainstreamed into policies for industrial development and economic growth.

Like research based on other developing countries, it is necessary to note that the Bangladesh shrimp sector suffers from inadequate and unreliable data collection (UNEP 2004). Much of the analyses are based on my semi-structured fieldwork in Bangladesh's inland shrimp industry from 2005 to 2006.[1] A multidisciplinary approach is taken to analyze the Bangladesh's shrimp industry. Issues related to the environment and fair-trade are omitted, not because they are unimportant, but rather that they are too important to do a justice in this short space. Theoretical frameworks are reviewed in section 2, while section 3 overviews the shrimp industry at global, national, and local levels. Next, section 4 discusses international trade requirements such as HACCP, as well as national regulations. Section 5 examines how actors in the shrimp value chain cope with international standards, as well as attempts to climb up the global commodity chain given all the constraints. Section 6 covers policy suggestions for the Bangladeshi government to ease economic insecurity for actors in the industry with section 7 concluding. Ultimately, this paper aims for a robust analysis that can be applied to other primary commodity based industries in developing countries.

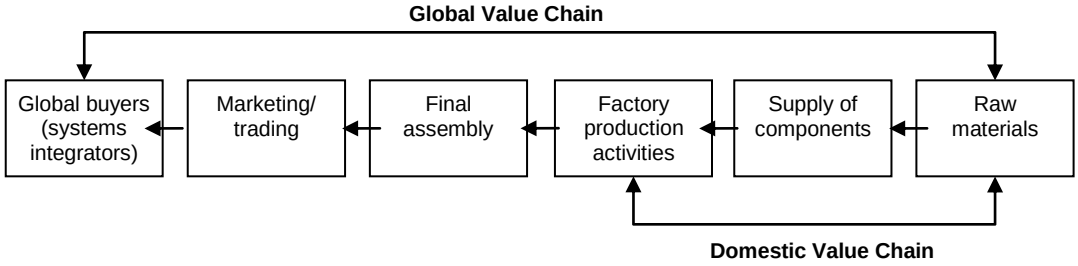
Theoretical Frameworks

The major framework of this study is built on insights from global VCs or GCCs, which identify sources of controls in the VC and influences on industrial organization in global trade (Gereffi 1994).[2] It also considers how to empower agents at the lower segment of the VC (Gibbon 2001). Within GCC studies, food chains like shrimp are buyer-driven GCCs (BGCCs) , where the governance structure is particularly organized and managed by global buyers (e.g. retailers, consumer countries' regulatory bodies, branded manufacture) (see Figure 2.1). VC activities develop or move up by upgrading technology (computerized and automated systems) and institutional structuring (training, management change). In mainstream GCC literature, a consolidated VC is the primary condition to successfully upgrade via technology and standardization. (Larsen 2004:10).

Governance and upgrade-related information cascades down from the top (Nolan et al 2006, Nolan 2004) as shown on Figure 2.2.

In the absence of lead or branded firms (which often is the case with agro-export commodities), regulatory bodies like the WTO and health and safety regulatory

Figure 2.1: Buyer Driven VC.

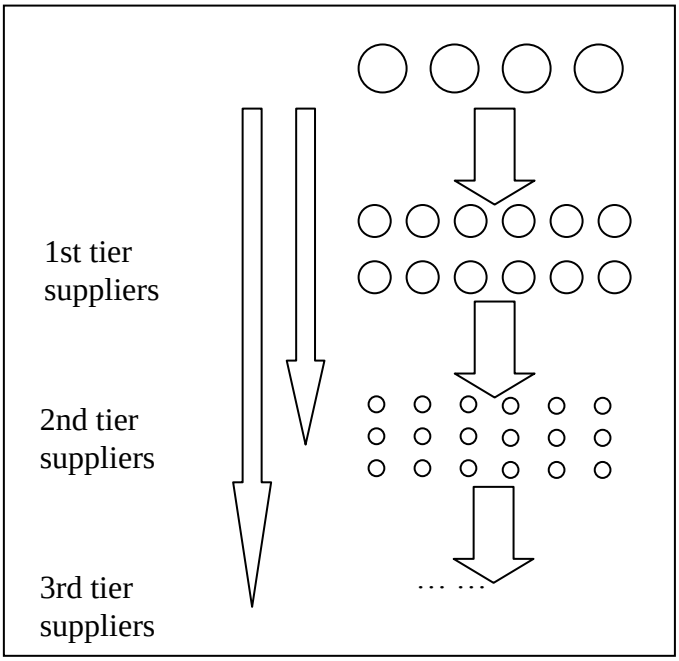


Source: Author

bodies like the United States Federal Drug Administration or the EU's EUROPA influence the governance structure of the VC. The exporting country's government normally is the local regulator for agro-exports and influences the VC through export promotion policies (e.g. tariff and tax levels). Effective governance depends on a consolidated VC and supporting institutions to distribute incentives to change (Rodrik et al.2004). Government agencies along with powerful mercantile groups often constitute the top tier in the formal economy.

Formal economy is the opposite of the informal economy, which is "employment without labour or social protection—both inside and outside informal enterprises, including both self-employment in small unregistered enterprises and wage employment in [legally] unprotected jobs [but operating by social rules]" (Chen 2006:2). The linkages between formal and informal economies are tied through public policy. Any policy changes cascade down, benefiting some and marginalizing others. In the Bangladeshi shrimp industry, the top tier is composed of governmental fishery development agencies and the Bangladeshi exporter association (BFFEA) in the formal sector, who benefits from government protection from external shocks. The bottom and the middle sectors of the VC, residing in the informal sector, continue to act as shock absorbers.

Figure 2.2: Cascade Effect



Source: (Nolan et al. 2006:28)

GCC framework is criticized as inadequate to capture the complexities, difficulties, and internalization processes of different stakeholders in the chain (Cramer 1999; Gibbon 2000). Hence, it is important to identify spatial factors that affect production, growth, and international trade in the agro-industry VC, which stretches from formal to informal, differentiating in transaction costs, contractual relations, and property rights. These are "the rules of the game in society or, more formally, they are the humanly devised constraints that shape human interaction" and "define and limit the set of choices of individuals" (North 1990:3-4, emphasis added). The formal rules (the government, constitutions, statute law, common law, and regulations), informal constraints (conventions, norms, and self-enforced codes of conduct), and their enforcement characteristics create the motives for change (North 1995:15).

Coasian understanding of transaction costs is useful because it explains that economic agents mobilize political and social resources to reduce economic transaction costs and protect their interests (Coase 1937:3). This view was later extended to the concept of social networks (Roberts 1994, Fukuyama 2004), which are informal, extra-legal institutions that can be both rewarding (Fukuyama 2004) or constraining (Lourenco-Lindell 2002:245). The constraining aspects of social networks are social exclusion and corruption that underline asymmetric power relationships between economic agents. Economic agents follow a certain path delineated by a particular set of formal and especially informal constraints "that have deep-seated cultural antecedents" (North 1995:22). Through the process of deprivation, exploitation, or preferential treatment, informal networks structurally institutionalized systems of overcoming weakness, incapability, and limitations of formal institutions to facilitate economic activities for those outside the formal sphere (Rodrik 2003). Hence, these constraints determine the ways in which individuals learn, organizations develop, and ideologies are formed, creating the underling forces of change.

In developing countries, economic decision-makers are faced with informal institutional settings. People tend to engage in relationships between the business class and regulatory institutions, which are not problematic in and of themselves, but opportunistic behaviours, moral hazards, and adverse selection often cripple a fair selection process (Harriss-White 1995). Others suggest that under intense pressures of market liberalization, individuals economize and survive by transferring costs through exploitations of social networks. In global economic structures, social relationships function as an alternative form of economic regulation (Roberts 1994; Centeno and Portes 2003).

At the Crossroads: The Shrimp Industry

This section presents the relationship between international trade and the development of the Bangladeshi shrimp industry.

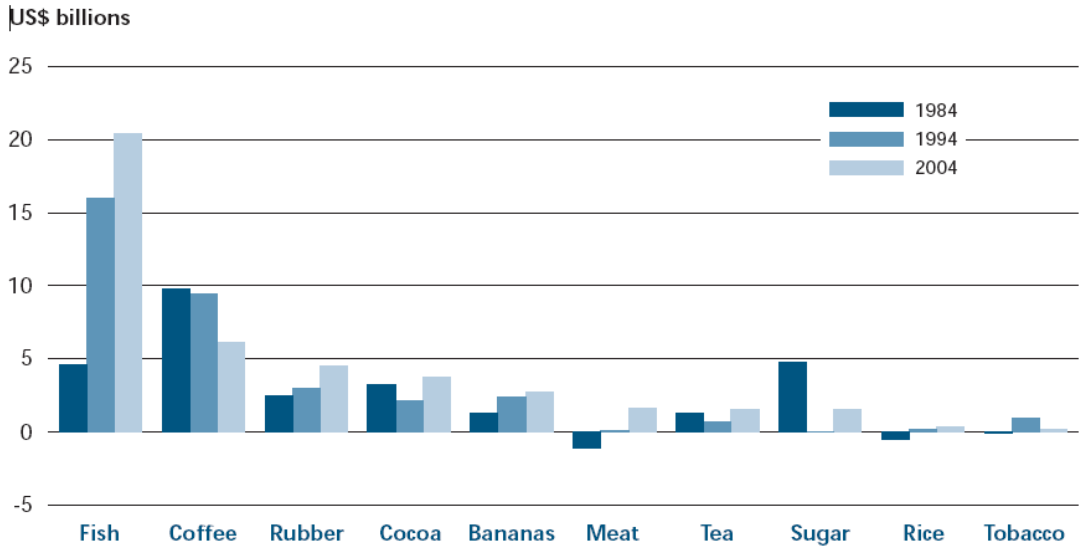
3.1. International

International trade has changed the character of the agricultural capitalization process in Less Developed Countries (LDCs), particularly in the fishery sector. The largest agricultural trade flows from LDCs to developed ones are fish, as measured by measured by export value (see Figure 3.1.). Shrimp is the largest category of globally traded fish (16.5% share) with high economic value (FAO 2006:47). International trade in shrimp nearly doubled between 1992 and 2003 (ICTSD 2006). On the demand side, the US, EU, and Japanese markets are the largest, with high income, urbanization, and health-consciousness increasing demand for quality, frozen fish and shrimps (FAO 2006).

The buyer-driven shrimp market is characterized by high demand and relatively low unit prices, which exerts pressure and power over LDC suppliers through competition. While the shrimp market as a whole has grown, the unit price of shrimp is roughly where it was 20 years ago (see
Figure 3.2.). In major consumer nations like Japan and the US, trade liberalization is married with non-tariff HACCP and SPS. Ostensibly, these measures define standards to prevent the spread of plant and animal pests and diseases. In practice, compliance irregularities are used as non-trade barriers, penalize exporters, reduce bargaining power, and decay industrial progress (UNEP 2004, Jha 2005, Stiglitz and Charlton 2005).

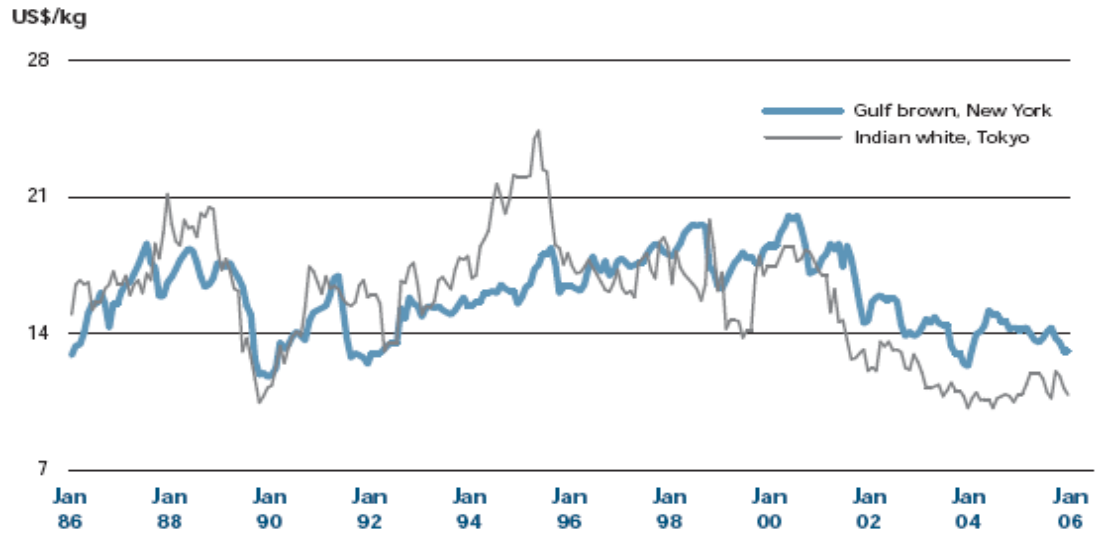
Price insecurity is offset by high market demand, bringing economic benefits to producers. Developing countries produce 80% shrimp supplies to the world. On average 60% of those dependent on the fishery-industry for security, nutrition, and livelihoods earn less than $1 a day (FAO 2006, ADB 2005). For the government, exports are an important way to service external debt (see
Table *3.1*). The number of fishermen in LDCs has grown by about 2% a year since the 1990s, driven by trade liberalization and government incentives (FAO 2006:22-23; World Bank 2004). Brazil, Argentina, and Ecuador increased shrimp exports to France, Italy, and Spain

Figure 3.1: LDCs' Net Commodities Exports



Source: FAO 2006:45

Figure 3.2: Unit price of wholesale, frozen, headless, shell-on shrimp, 16-20 count



Source: FAO 2006:50

by almost 70% in 2005 compared to two years earlier, intensifying competition with Asian producers (Jha 2005, World Bank 2004).

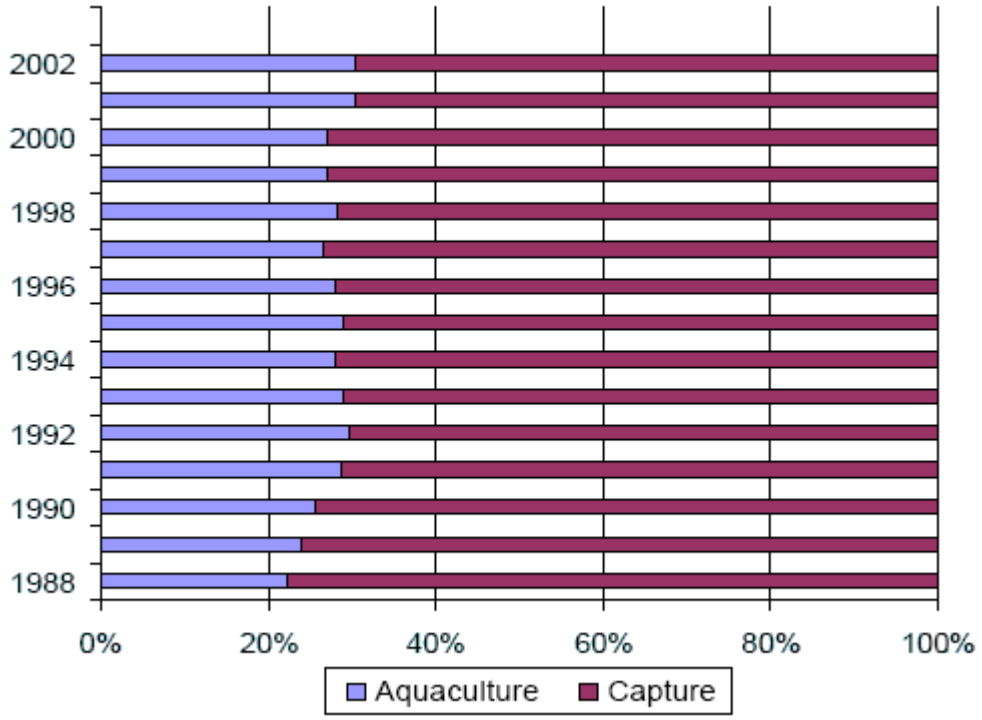
Despite the growth, global environmental and trade policy is not integrated and the sector is not well managed. As Figure illustrates, the ratio of cultured to captured shrimp production averaged 1:3 from 1988 to 2002 (Josupeit 2004, Ahmad et al. 2003). Unfortunately, 75% of fisheries are significantly depleted or over exploited, and within the next 50 years, 2000 species of fish will be completely destroyed (Nolan et al. 2006; Delgado et al. 2003, ICTSD 2006). Increasing buyers' pressure, growing competition, and environmental stress poses a serious threat to the sustainability of this industry, which is the primary source of income for millions of poor families in developing countries.

Table 3.1: Farmed shrimp production and external debt indicators, top ten producers (1998)

Country	Production (000s metric tonnes)	Share of global farmed shrimp production (%)	Production (US$ millions)	External debt (US$ millions)	Debt service as a percentage of total exports(%)
Thailand	244	22	1,607	23,537	16
Indonesia	169	15	980	59,402	37
Ecuador	144	13	727	11,317	35
China	143	13	987	44,932	9
Vietnam	116	10	557	10,762	13
India	81	7	586	75,407	28
Bangladesh	66	6	351	11,118	21
Mexico	24	2	145	93,826	32
Columbia	8	< 1	62	16,886	48
Honduras	8	< 1	57	3,386	12
Other	111	11	n.a.	n.a.	n.a.
Total	1,114	100	6,059	n.a.	n.a.

Source: adapted from Neiland et al. 2001:266

Figure 3.3: Global Shrimp Aquaculture Versus Catch



Source: Josupeit 2004:9

3.2. Bangladesh

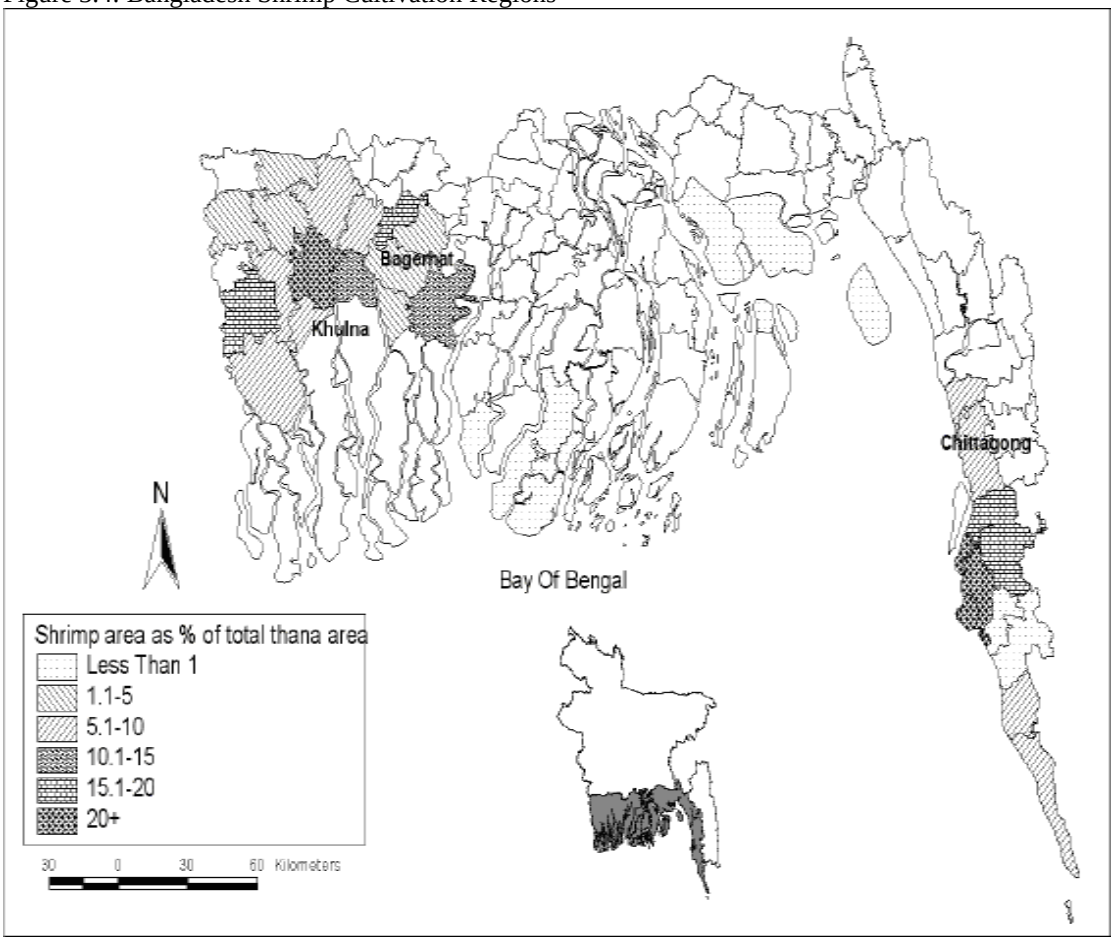
The coastal ecology and climatic conditions in Bangladesh are extremely suitable for shrimp cultivation with low production costs. Initially, shrimps were only produced for domestic consumption in coastal districts like Khulna, Begherhat, and Chittagong (see Figure), though export-oriented production is now dominant. The primary shrimp cultivars farmed in Bangladesh are freshwater macrobrachium rosenbergii, locally called *golda* , and brackish-water penaeus monodon, locally called *bagda*.[3] The coastal regions are historically densely populated, poorly regulated, and suffer from weak public infrastructure due to frequent flooding and natural disasters.

In the early 1950s, coastal areas began shrimp farming in low-lying tidal flats within the Bangladesh Water Development Board's (BWDB) polders (Islam 2003). A 1951 Food and Agriculture Organization (FAO) report on the fisheries of East Pakistan discussed "brackish water trapping pond operations", locally known as bheries, developed as survival strategy by the poor (FAO 1951, seen in Pokrant and Reeves 2005). While *bagda* farming expanded in brackish water, *golda* farming started to replace losses from rice and other vegetation production during the monsoon season from April to June.

Land-holding priorities shifted, replacing traditional land uses by export crop production and shrimp farming joined the seasonal, social, and ecological rhythms of village life. 75% of exported shrimps are inland cultured using traditional techniques (Khatun 2004). Shrimp farming in the costal region developed along socio-economically divided lines. *Bagda* fetch 30%-40% higher prices than *golda* in the international market, but are riskier to produce due to low quality feed and fry (GOB 2003).

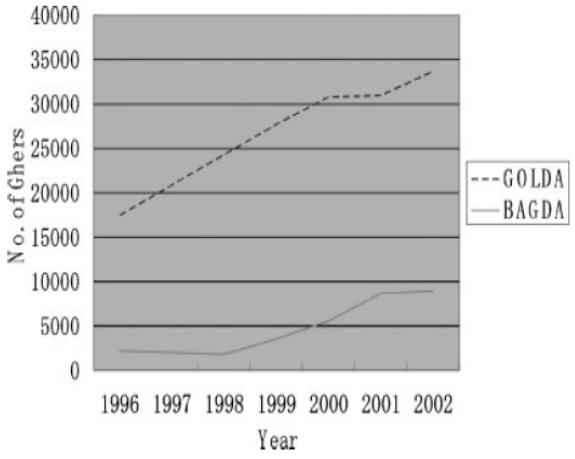
Figure 3.5 and Figure 3.6 diagram the growth of *bagda* and *golda* farming.

Figure 3.4: Bangladesh Shrimp Cultivation Regions



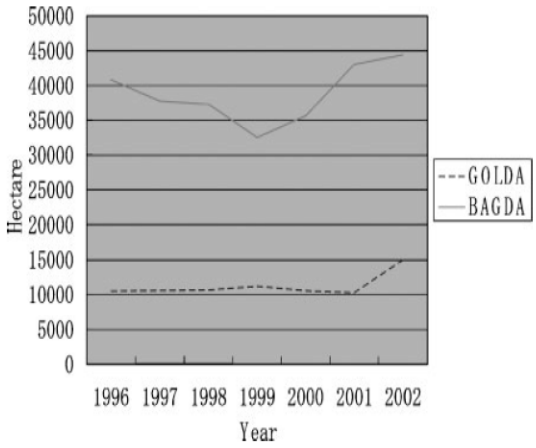
Source: Khatun 2004:22

Figure 3.5: The number of ghers in Bagerhat district



Source: seen in Ito 2004:1005

Figure 3.6:Area of ghers (ha) in Bagerhat district



Source: seen in Ito 2004:1006

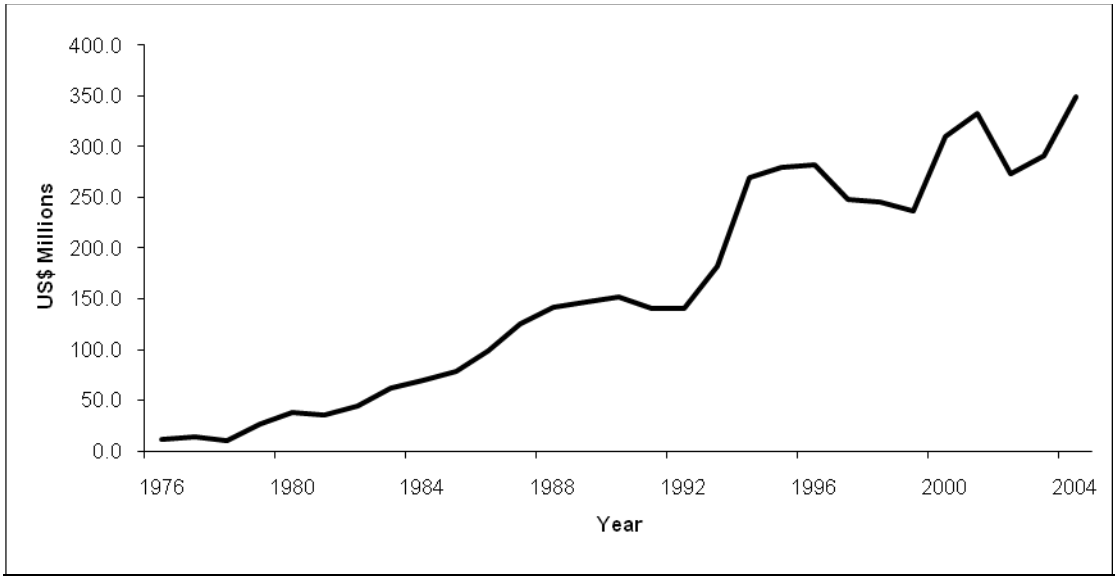
The *bagda* industry attracted entrepreneurs, but suffers from export shrimp shortages because the production system remains traditional, with production rates around 200-300 shrimp per square meter. Bangladesh needs to move to intensive farming, as competitors produce 1500-2000 shrimp per square meter. In absence of adequate *bagda* hatcheries and fry production, about 90% of shrimp fry is bought by farmers from rural markets (Khatun 2004). Most of the *bagda* fries in rural markets are imported. *Golda* farming attracted SMEs due to its low market price and demand (minimum .28 hectares). *Golda* fries are caught by the producers and their family members, or bought from local landless females and poor children. With low entry barriers and low capital necessary for a *gher* [4] (TK 2,500), *golda* farming grew at 10% through the 1990s (GOB 2003).

Bangladesh's shrimp industry export history goes back to the 1960s, beginning with processed fish and shrimp exports to expatriate Bangladeshi communities and a trade in dry fish with East Asia (Pokrant and Reeves 2005). Entrepreneurs with capital, education, class, and an appetite for risk realized the potential of shrimp cultivation in the 1970s and shrimp exports rose steadily (see Figure 3.7). Market liberalization in the 1980s brought the fishery industry in the government's focus and attracted more entrepreneurs. Despite the long history, exporters are far from adding value to their products, instead relying on basic head-on and head-off block shrimp exports. Competitor countries like Thailand, China, and India ramped up value-added (pre-cooked, semi-cooked, pre-dressed, pre-marinated) shrimp production in the 1990s.

The Bangladesh government developed a second five-year plan (1980-1985) shrimp farming and adopted export incentives to encourage the budding industry (Ahmed et al. 2002). Studies by Habib (1999) and Maniruzzaman et.al (2001) identified major institutions (see Figure), comprised of roughly 20 ministries and divisions and more than 25 departments involved in the fisheries sector, spreading from national to municipality levels. Incentives narrowly focused on exporters and neglected producers. Producers depend on the informal market for credit, technical support, and are subject to manipulation and marginalization. Meanwhile exporters (shrimp processing factories) have formal support and more than adequate incentives like low interest loans, zero import tariff for capital goods, inputs, and chemical imports, which created disincentives for investment (Soussan and Datta 1998).

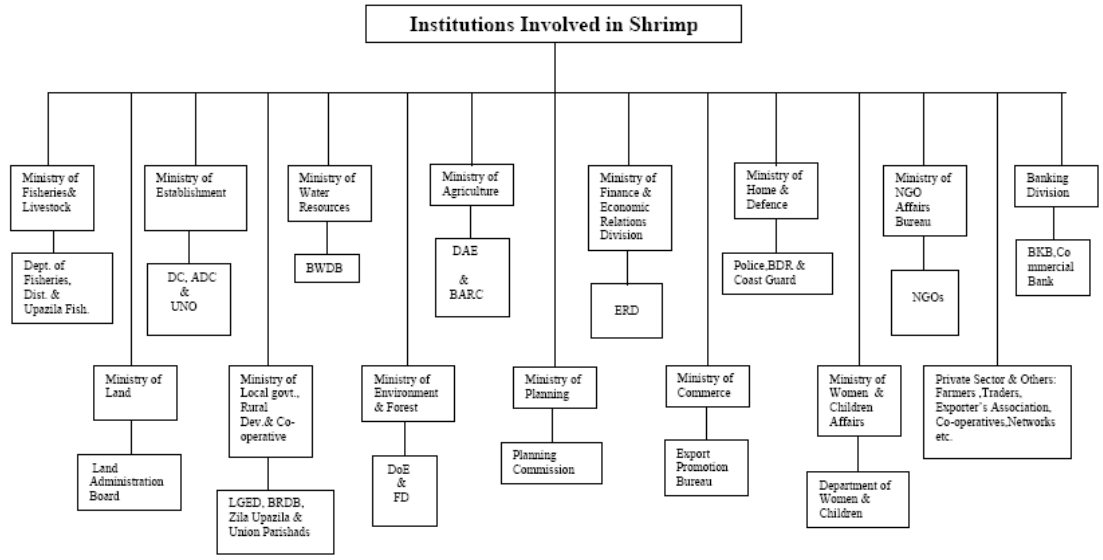
The multiplicity of institutions is greater than competitors like India, China, and Thailand. So far, they have failed to promote this growing sector in a cohesive fashion (Habib 1999, Maniruzzaman et al. 2001). To reinvigorate the industry, the market development needs to be critically examined against institutional policy measures.

Figure 3.7: Bangladesh frozen shrimp exports (1976-2004)



Source: various FAO data

Figure 3.8: Bangladesh Shrimp Industry's Institutional Complexity

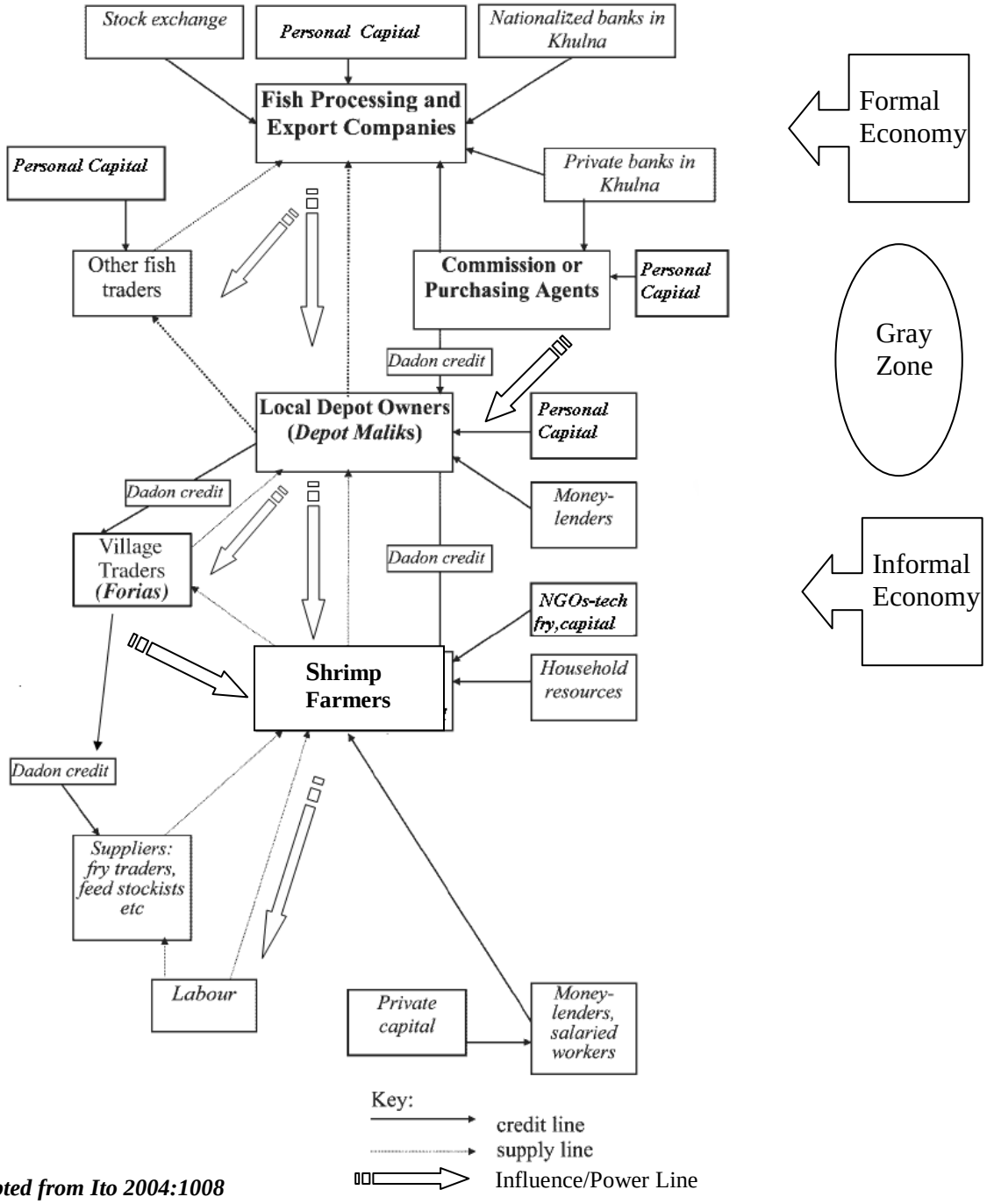


Source: Ahmed et al. 2002:23

3.3. Bangladeshi Shrimp Industry Value Chain

The shrimp industry value chain in Bangladesh developed with clear linkages under market liberalization, organized here into three main segments: producers or farmers at the lowest tier, intermediaries (depot owners, forias, commission agents, mainly SMEs), and finally exporters (see Figure). From a public policy context, the Bangladeshi VC is in the grey zone between formality and informality since the lowest and the middle tiers are mostly in the informal economy, while the export processing factories operate formally.

Figure 3.9: Bangladesh Value Chain (VC)



Source: adapted from Ito 2004:1008

At the first tier are the poor, rural shrimp farmers. The total area under shrimp cultivation is about 141,353 hectares, out of which only 30,000 hectares are used for *golda* farming (Khatun 2004). However, the number of *golda* farms (105,000) is significantly higher than *bagda* farms (37,397) (ibid). Thousands of extremely poor women and children in the coastal zone are the primary suppliers of wild shrimp fry. This group is the most disintegrated and heavily depends on the local political elites. At the second tier, the intermediary agents (SMEs) collect shrimps from various sources and supply them to factories for processing. Exporters integrate into the backward linkages of the VC by holding monetary

collateral of about US$ 20,000 from each of the supplier agents. There are roughly 45,000 commission agents who liaise between exporters and depot owner, about 5,000 depot owners (storage owners-cum-fish buyers), and 35,000 forias. Forias are small commission agents (SMEs) employed by depot owners to travel the region to buy shrimps directly at the farm gate at prices set in advance though interlocked loans. The interlocked loans are locally called *dadon*, an informal mechanism to facilitate production in the absence of state support by giving out advance loans. At the top tier are the exporters who own the shrimp processing factories. This group is the power house and socio-political elite of the value chain. To exert greater power over the rest of the VC, this group formally organized as the Bangladesh Frozen Foods Exporters Association (BFFEA) in 1984. BFFEA had 124 factories registered prior to 1997. During the fieldwork, it was known that there are only 64 companies in operation of which 48 plants had EU approval and only 30 remained in full operations. Much of the technological upgrading has been driven by this group to improve their market position.

Trade Regulation and Bangladesh

This section analyzes the exogenous and endogenous regulatory frameworks which influences the industry's moving-up process.

4.1. Global Standards

The Financial Times remarked that the EU's SPS standards "appear to be motivated to preserve the EU's agricultural system rather than to be based on science" (Beattie 2005). The WTO sets the main framework for managing non-tariff measures through guidelines for acceptable use of standards. The WTO relies on a series of international mechanisms for standards, certification, and other efforts, to harmonize global trading processes, but what extent they are scientifically set and institutionally compatible with those required to implement them is a matter of current international trade disputes.

While harmonizing international standards may help simplify import requirements, the total process became stringent and Janus-faced. The standards are so highly institutionalized and idealized that it lost connection with the reality in producing countries. Traceability and labeling schemes for fish and fishery products are important standards held by HACCP bound importers (Jha 2005). In Bangladesh, forias collect shrimps from numerous small-scale farmers and bring them to the factory for processing in a lot. Under the existing production system, it is impractical to comply with traceability and labeling standards. The international requirements actuality resulted in more marginalizing domestic policy proposals, such as allocating 100 acres of land to exporters to commercialize shrimp production. This proposal does not consider the potential employment loss to the millions of people whose livelihoods depend on the sector.

HACCP establishes target and acceptance levels of chemical and antibiotic usage and identifies appropriate tests for monitoring, measuring, and correction procedures at a series of control points throughout the food handling process (McDorman 1997). However, there is no direct control over importing countries' consumer policies, though there is an effort to standardize levels across markets. In the US, ethylene oxide (ETO) is widely used as a sterilizing agent, but is not approved in the EU or Japan (Jha 2005). Such incongruity, elaborate formalities, and unnecessary delays levy significant economic and transaction costs on the Bangladesh value chain (Fliess and Lejarraga 2005).

Sine the 1997 EU ban, the Bangladesh government institutionalized SPS policy prescription. It demands acquisition of new technology, requiring heavy investment on infrastructure, training of human resources, and change in management. For example, a sterilization unit of moderate capacity would cost about US$1 million and would require further changes in the production process to utilize the machinery efficiently (Jha 2005). Examples of other unrealizable standards geared towards exclusionary barriers include (for more, see Jha 2005:42):

- non-slip floors
- easy to clean walls and ceilings
- waterproof floors in food handling and cold room areas
- walls free from projections and rounded junctions
- inwards sloping windowsills

4.2. National Regulatory Environment

In the 1990s, fishery industry development was a core objective for rural sector development. The government committed unregistered land distributions (*kash*) to shrimp entrepreneurs. The leases were not bound to any quota targets, correlating to a 88% subsidy for semi-intensive *bagda* producers (GOB 2003). Exporters received preferential interest rates, averaging 7%-9% compared to the general commercial rate averaging 15% (BCB 2007). Also, according to Shrimp Culture Tax-1992 export processing plants and hatchery owners enjoyed a 5-7 year tax holidays, while small producers were still taxed. Amidst various structural

support programs, the government failed to facilitate incentives for small-scale producers, and as a result, the sector developed along the socio-political lines. The entrance of urban elites reduced the power of local elites and distorted the social and cultural fabric of the coastal zone (Datta 2001). Seventy percent of shrimp farms are owned by non-locals, attracted by the sheer profitability of shrimp farming and the lack of state regulation. Deterioration of the social structure led to social conflict and displacement from the land (Ahmad et al. 2003; EJF 2003).

Institutionally, this sector's trade policy lacks control measures. There is a zero tariff policy for imports of capital machinery (e.g. water purifiers, grading machines, coolers) and raw materials (fry, feed) to foster growth (GOB 2003). Lack of accountability on imported goods results in low quality capital machinery, chemicals, and shrimp fry and feed that contaminate the total value chain (BFFEA 2004, ICTSD 2006). After 1997's incident, the Fishery Department introduced inspection and quality control rules, but with limited influence due to ineffective laboratories that are under equipped, unmanned, or uncontrolled. From 2004 to 2006, more than 120 containers with 40 tonnes of shrimp each were rejected by the FDA, damaging the national reputation and crippling poor producers in the first tier (Daily Star 2006, BFFEA 2004).

The WTO facilitates donor assistance for governments to implement SPS requirements, but such efforts have failed to produce substantive results. For one, donors do not trust other donors and governments in poor countries. The EU's aid to the fishery sector may require use of European specialists rather than delegating authority to the government or to other countries' specialists (Jha 2005). Secondly, there is limited attention to integrate local tacit knowledge into the imported production and preparation systems. In 2001, DFID started a five year project to improve *golda* farming techniques by providing enrolled farmers with credit and technology. At the end of five years, these farmers are left with nothing but a reformed pond that has high maintenance costs. These projects focus on the wrong issue, such as pond reform instead of policy reform, or follow lenders' motives (e.g. environmental, gender equality, and so on), which change cyclically. There is no integration among initiatives, projects overlap, and do not have follow-up mechanisms, leaving the industry more confused and distressed. Overall, these short-terms projects not only destroy the farmers' tacit knowledgebase, but also create disincentive to upgrade the production system, undermining any progress already made.

Moving up Process

GCC literature argues that nodes in the VC are able to transfer costs to adjacent nodes through a process known as internalization. Some costs exporters cannot avoid, though there are efforts to comply with mandatory HACCP regulations and upgrade the VC to move up the GCC. Bangladesh spends about US$ 2.2 million annually, of which the government contributes only US$ 225,000 to maintain HACCP monitoring programmes, testing fees, human resource training, etc., (see Table *5.1:*5.1) (Khatun 2004). These costs are largely borne by the exporters.

Table 5.1: Cost of HACCP conformity as of 2004 in Bangladesh shrimp processing plants (US$ millions)

Cost category	Cost to date	Additional cost anticipated	Total	Maintenance costs expected
Technical advice	3.6	0.2	3.8	0.3
Employee training	1.8	0.2	2.0	0.3
Sanitation audits	6.3	0.8	7.1	0.6
Plant repair/modifications	165.9	27.0	192.9	22.2
Added equipment cleaning	25.5	3.5	29.0	2.2
Rejected product	2.5	0.3	2.8	7.3
Lab installation	30.9	5.4	36.3	2.0
All other	3.1	0.2	3.3	0.0
Total	239.6	37.6	277.2	34.9

Source: adapted from Khatun 2004:78

Exporters control and disseminate local standards, and since shrimp are highly perishable, focus is placed on timeliness and efficiency. In practice, shrimps need to reach the factory floor within 6-8 hours of harvest. Any delay costs monetary value to each agent in the VC. Depot owners aggregate and refrigerate foria deliveries until reaching an adequate threshold before transporting to factories for processing.

At levels in the supply chain below processing factories, profit margins average 2-3 percent. Such low margins prevent 85% of VC participants to capitalize income, making bare survival a challenge. Not surprisingly, people avoid and reject HACCP requirements and neglect to upgrade their segment of the value chain. Primarily, this is due to little formal education, no access to credit, and lack of technology, which inhibit understanding HACCP requirements. Secondarily, there is no "business sense" to it when many exchanges take place in the informal economy through social networks and interlocking credit structures. Table 5.2 shows the similarity of profit margins among intermediaries.

Export Processing Plant Owners (BFFEA)

At the top of the Bangladesh shrimp VC, BFFEA defend its independence and power through mercantile lobbies to strategize economic positions, benefits, and access to incentives.[5] BFFEA and government departments contest each others' authority to upgrade the shrimp industry and maintain HACCP compliance. Although their relationship reduces political rent to some extent by pressuring formal institutions to be efficient, BFFEA's economic power tends to further marginalize SMEs in the VC.

For example, to encourage exports and compensate for losses, the government offers a 10% cash incentive based on export volume, in addition to the support mentioned in section 0. While some factories have achieved EU certification with state of the art operation facilities, others simply included the 10% cash incentives into their pricing function to competitively reduce prices (GoB 2003). Without efficient checks and balances, such incentives distort market prices and intensify competition. Also, while export factories are major source of employment, minimum wage laws are hardly followed. Low wages and insecure employment is increasing social vulnerability among women and overall lowering living standards (Kabeer 2000).

Exporters influence the VC by holding collateral from its intermediaries, which reduces risks price volatility and ensures access to farmer production information to plan export contracts. While manipulation occurs, a few exporters have strategically used these interlocking relationships by investing in upgrades to depot owners' storage facilities. The practice is not standard in Bangladesh, but it is indicative of efforts to move up the GCC.

Intermediary Agents

With HACCP regulations and intense market competition, both commission agents and depot owners face insecure of shrimp production, unequal bargaining power, and intense pressure cascading down from the top. Intermediary agents manage by finding socially embedded clientele relationships with factory staff and patron relationships with the farmers. Under the intense market competition and weak formal institutions, society redefines moral norms and encourages a progressive bribing

Table 5.2: Profit margins of the Bangladesh shrimp market chain

Sector	Purchase price (TK/kg)	Sale price (TK/Kg)	Mark-up (%)
Shrimp Traders	433	442	2.10%
Small Shrimp Depot	426	436	2.40%
Large Shrimp depots	410	421	2.70%
Commission Agents	-	-	TK 5/kg†
Processing factories	444	Int'l market rate	-

† Commission agents mark up roughly TK 5 per kg delivered.
Note: Prices for *golda* are 20-40% less than *bagda* (TK 250/kg).
Prices for other kinds of shrimp are very low (TK 60/kg).
Source: GOB 2003

system to transfer pressure through informal institutions. Most agents engage in "profit sharing" with factory staff, including guards, graders, and managers, to trade non-compliant shrimp since they are bonded by collateral. Government agencies and non government organizations (NGOs) efforts to encourage compliance via workshops and temporary forces are ineffective. Upgrading shops from traditional bamboo or wood construction to modern forms with running water and electricity is a luxury and a waste when agents live in shacks without running water, electricity, or food security (Jha 2005; Ito 2004).

Intermediaries are not formally organized like BFFEA, but there is an implicit understanding among agents' business-territory. Traditionally, intermediary agents operate within the domain of informality, focusing more on power than on finance (Harriss-White 2004). They engage in collusion amongst the group, and provide interlocked credit, advice (business to family relationships, Department of Forests or HACCP inspector visits, and weather updates), and security to their beneficiaries (designated forias and farmers). Despite widespread informality, about 25% of intermediaries comply with HACCP regulations (GOB 2004),[6] largely motivated to move up the value chain.

Low Tier Farmers

While other nodes in the VC have backward linkages to pass costs on to, farmers have no other group to pass the burden. Particularly, *golda* farmers' households collect their own fries or receive advanced dadon, and so have no opportunity to redistribute costs. Through NGOs and donor agencies advocate that *golda* production is competitive in Bangladesh, but *golda* farming faces serious challenges without financial and other assistance. High prices, low quality feed, and a shortage of shrimps to process put the Bangladeshi shrimp industry at a comparative disadvantage (Ling et al. 1999). If intensive *bagda* production takes off, small farmers risk further marginalization (Ito 2004).

HACCP requirements transferred significant costs to farmers. Previously, shrimp grading and head removal was often conducted in the farmers' village homesteads. Bamboo baskets were commonly used to carry shrimps. For transparency and hygiene requirements, HACCP requires that farmers bring shrimp directly to depot owners' shops in plastic baskets (Khatun 2004). While the plastic basket itself is one cost, another is the communication systems between remote areas and factories located in the city. The means of transportation are underdeveloped and transportation difficulties cause loss of shrimp revenues. Farmers use blocked ice, but often made from non-sterilized water, contamination from which leads to significant losses at this level of the VC. Farmers are most vulnerable to price cuts, yet there is little evidence that they engage in cooperative forces.

In order to promote HACCP compliance, intensive farming, and improve shrimp quality, the government issued an order banning shrimp fry imports and wild fry catch in 2000 (Ahmad et al. 2003). While the move had some merit, there were inadequate alternative sources of good quality shrimp fry, and incomes suffered for this extremely poor population. The ban across the remote coastal areas turned out to be impossible. People at this level are already disadvantaged without added difficulties from HACCP. Projects to educate, regulate, and improve the conditions of rural farmers have produced few results.

Policy Matters: Market, State, and Society

The range of national policy choices are shaped not only by international actions, as described in the previous sections, but by the political, social, and economic situation of individual countries (Wade 1990). Market reform policies undertaken by Bangladesh in the 1980s and 1990s largely neglected social policy, and in particular, ignored the local politics that influence income distribution. This section seeks to address the shortcomings of previous policies with a set of policy proposals.

Due to space constraints, there is no detailed exploration of policy design or implementations. The proposals are a starting point to incorporate local socio-political considerations into industrial policy. To do so, the Bangladeshi government and researchers should undertake a household level economic shock and vulnerability study to build a framework for national policy responses. Peoples' reactions to policies are conditioned by the impact of international trade driven economic shocks at the household level and the range of options that households have to mitigate the impact (Ocompo et, al. 2007).

First, as discussed, policies should regulate, reward, and penalize private entities but should not try to compensate for economic shocks. If an unforeseeable crisis creates an economic shock requiring compensation, policy should not discriminate against affected actors in the VC. For

example, the entire VC suffered from the 1997 ban, but incentives were given to factory owners/exporters and not other actors. Recipients of government incentives should undergo third party audits verifying fulfilment of social and economic objectives, such as job creation, export growth, or technology improvements. Bangladesh's current fishery industry policies are discriminatory, which essentially weakens and fragments the VC. As discussed earlier, it becomes difficult to move up the GCC when the VC is unconsolidated.

Second, Bangladesh needs to improve import policies to ensure quality and appropriateness. Policy can support farmers by regulating imports for basic acceptability, such as shrimp fry and feed contamination screening. The VC cannot improve its quality issues without solving the critical supply chain bottleneck input crisis. Instead of government laboratories as the only check point, consumers of these imports should receive training, technology, and basic tools to test on their own.

Third, counter cyclical policies are needed to protect jobs and incomes and provide adequate social security in times of economic shocks and natural disaster. Such policy needs to be cohesive to cover counter cyclical patterns such as price fluctuations and global trade policy changes. The finance ministry, industrial ministry, or land reform ministry should be tasked to include a complete analysis of the distributive effects of proposed budgetary, tax, or land reform initiatives to the VC.

Fourth, tacit knowledge, structural support, and sustainable technology transfers need to be mainstreamed through public entities (e.g. NGOs) initiatives to help upgrade the GCC. There should be a government or private agency dedicated to maintain a roster of public entities. Though shrimp industry development is a part of national rural millennium development plan (GOB 2004), very little has been done to streamline policies to address local needs. Poor infrastructure for roads, electricity, and water, coupled with inadequate physical security hampers actors' ability to upgrade, maintain quality, and promote growth.

Fifth, collectiveness should be promoted at the bottom half of the supply chain. This largely informal segment should have greater incentives to collectively contest and resist exploitation and discriminating policies, but the informality of their business, continuous insecurity, and submission to local political power hampers their collective force (Kabeer 2000). Lack of collective force translates to lack of political voice to represent their needs to the government and exporters. There should be a greater effort to streamline public policy to the needs of this informal segment. Education and good governance are essential in this regard.

Sixth, Bangladesh should diversify trading partners to find policy manoeuvring space. Under HACCP requirements, Bangladesh has little opportunity to move up the value chain. Instead of depending on the US and EU, Bangladesh should focus more on underexploited markets such as the Middle East and emerging markets in China and African nations. This will provide shrimp producers more space to improve their VC activities while seeking to venture into new markets. Alternatively, the government should only give licences to export to EU and US markets to factories that are HACCP certified. The state could accompany the licenses with gradual but pragmatic trade targets for weaker companies and permit exports to the US and EU after reaching certain targets.

Finally, countries like Bangladesh, with weak institutional support, need to thoroughly and carefully consider international insurance proposed for countries facing shocks from price swings and non-tariff barriers to trade. Such insurance is designed to offset monetary shocks, but is not attuned to socio-political crisis that the poor encounter on a daily basis. For Bangladesh, this assistance should be provided on a macroeconomic level, in particular through debt management, and should consider household level effects instead of simple product loss compensation. Incentives should be given to agents that respect rules like HACCP and show clear evidence efforts to upgrading their position in the VC, thereby helping the Bangladeshi shrimp industry move up the GCC.

Conclusion

Similar to the experience of the Bangladesh shrimp industry, primary commodity producing countries face a number of challenges. The country must reconcile tension among individual actors in the VC, harmonize government incentives for each tier of the VC, and foster trust and good governance across the GCC. Agro-industries may fail if they ignore the poor producers whose products essentially move up the VC and land on the table of consumers. Open trade, increased investment, and total factor productivity are highly correlated with economic actors' capacity to govern, make decisions, and access resources that impact future development.

The government needs to carefully design an efficient coordination system between economic and social authorities, in which social objectives are effectively mainstreamed into the economic policy of industrial development and economic growth. Drastic change has high costs to the majority poor population because primary commodities undergo "social production" which is politicized by capitalists. Sustainable development must contend with the drive towards global free market fundamentalism. This is a crossroad for primary commodity exporting countries in the buyer driven global commodity chain.

Endnotes

1. The field work involved visit to the major shrimp producing zones in Khulna, Barisal, Chittagong and Cox's Bazar. In each location, I conducted interviews with numerous business owners from exporters to intermediaries to shrimp farmers, local business historians, political leaders, associate executives, day labours and other relevant actors.

2. Value chain is a generic label for an input-output structure of value adding activities beginning with raw material (e.g. raw shrimp) and ending into finished product (e.g. blocked frozen shrimp) (Gereffi *et al.* 1994:2). This paper treats value chains and commodity chains synonymously.

3. *Bagda* production averages twice that of *golda*.

4. A *Gher* is a piece of land surrounded by water by raised dyke for collecting rain fed water or creating trances from the nearby rivers or cannels.

5. BFFEA is systematically capitalizing on the developing state's preference to foreign exchange as they utilize the power to devising fishery sector targets for 2008 (VISION 2008) which includes more subsidies and land holdings for them.

6. Although no concrete surveys, it is estimated by local authorities that only 25% of middlemen were able to register as HACCP compliant. Out of the remaining 75%, a few still operate informally while others just closed shop.

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Nazia Habib-Mintz
St. Edmund's College
University of Cambridge
nsh29@cam.ac.uk

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