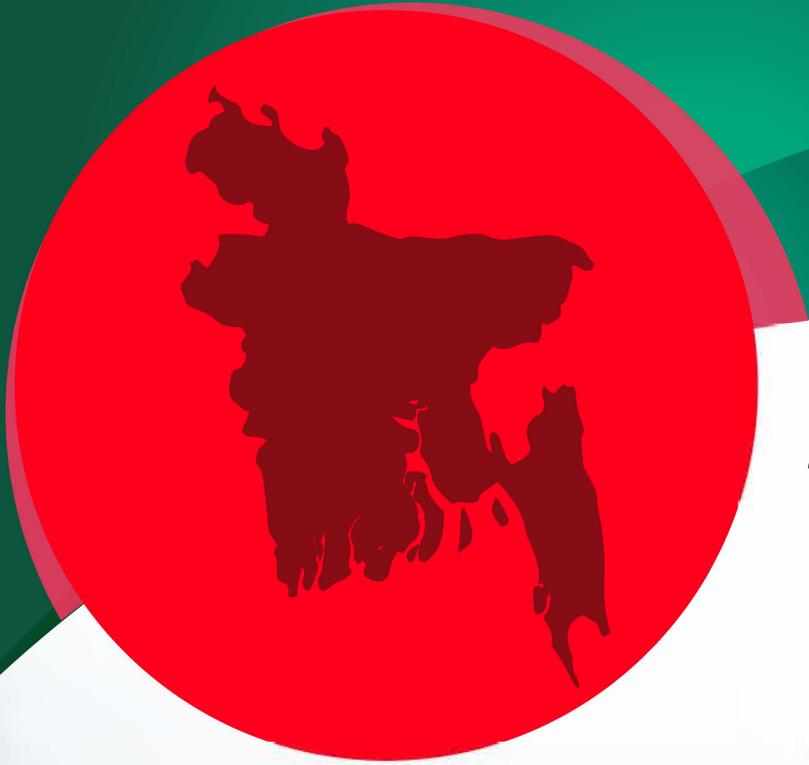


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FROM THE EDITOR

This special issue of the Journal of Bangladesh Studies (JBS) presents nine articles selected by the track chairs of the conference, “*Bridging the Policy-Action Divide: Challenges & Prospects for Bangladesh*,” organized at the University of California, Berkeley, by Bangladesh Development Initiative (BDI) in February 2013. The lead article was invited by the editorial board to reflect the lifelong and evolutionary thinking of Professor Rehman Sobhan that was presented in his keynote speech at Berkeley as the recipient of the BDI Lifetime Achievement Award.

Sobhan focuses on the issue of injustice that has permeated Bangladesh society and held it captive since time immemorial. The growing inequalities in ownership of wealth within a “*malfunctioning*” democratic process, according to Sobhan, has held many a captive victim in the clutches of both internal and external structural conditions in society from which it is difficult to break free. This “*structural*” injustice inflicted on the general masses and its debilitating effects on development are Sobhan’s key concerns. As a consequence he elaborates on needed “*corrections*” ... in state injustice, rural injustice, injustices in the ownership of wealth, injustices in the global economic system, regional injustice, problems emanating from aid dependence, gender injustice, etc. While Sobhan outlines “*what*” needs to be done (e.g., expanding ownership and control of the poor over productive asset, access to knowledge, access to public resource, etc.), “*how*” these prerogatives ought to be implemented, we hope, will be further outlined, especially the essence of his strategy, in a subsequent follow-up article.

Ali Riaz reflects on the nature and quality of democracy in Bangladesh and points to the serious shortcomings in governance in Bangladesh — from non-functioning of the parliament, absence of rule of law, politicization of the judiciary, extra judicial killings, etc. — to conclude that the country’s transition from authoritarian to democratic norms remains quite incomplete, despite years of rhetoric and much posturing. The key contribution of the article is in its use of empirical measurements. Instead of using anecdotal evidence or subjective analysis to examine Bangladesh as a “*hybrid regime*,” Riaz uses six defining characteristics: competitive elections, corruption, democratic quality, press freedom, civil liberties, and rule of law. To facilitate the processes of democratization, lest the country reverts to a de facto one-party authoritarian state, Riaz emphasizes the need for strong and effective political

opposition and a renewed interplay between ordinary citizens and the opposition, in addition to developing a civic culture of engagement. Akhand A. Hussain uses econometric modeling to examine how money supply impacts food price and inflation in Bangladesh. The author concludes that “*money, output, and prices are cointegrally related*,” allowing monetary authorities to create “*inflation surprises*” to stimulate economic activity. The author expresses concern about the opacity in the conduct of monetary policy, thereby affecting optimal objective and strategy in such policy.

A.F.M. Aatur Rahman and Bernhard G. Gunter explore how money supply affects stock prices. While economic theories argue for a positive relationship, empirical evidence to the contrary has also been shown. Using cointegration analysis the authors conclude for Bangladesh that money supply growth does create a positive effect on the Dhaka Stock Exchange index that, in turn, affects real interest negatively. Implications for Bangladesh Bank’s policy stance from the findings are discussed: that the stock market may be managed via signals about changes in monetary policy.

Deb J. Hill and Muhammad M. Rahman address a much neglected area of research: inclusive education. While the Bangladesh Government’s concern for social equity has been consistent, years of neglect of the education sector has not been able to address priorities for the country’s disabled population who are thus relegated to a “*lifetime of struggle and material poverty*.” As a human rights issue, inclusion is an imperative. The authors advocate an ideological shift to attend to the “*special needs*” of a much neglected segment of the population.

Syed S. Andaleeb and Ali Kara address the issue of measuring service quality in the hospitals in Bangladesh. Given the availability of a variety of measures of service quality derived from marketing to health services literature, the authors examine how such measures can be improved, especially in the context of hospitals where patients encounter not one, but multiple service providers. Using structural equations modeling (SEM) the authors propose a new set of measures. To corroborate the validity of the measures they are related to satisfaction and loyalty. The authors find that their measures are consistent with theoretical predictions.

M.A. Rashed, M.M. Alam and Fahim Faisal examine the effectiveness of existing Public Private Partner-

ship (PPP) projects in Bangladesh from institutional, regulatory, project financing, and other policy-relevant perspectives. Using selected case studies (Meghnaghat 450 MW Power Plant, Dhaka-Chittagong National Highway, Sonamasjid Land Port, and Khanpur Inland Container Terminal Project), the authors identify a variety of problems of PPP concerning project implementation. The changing of rules by the government for political expediency is a case in point for which the authors emphasize the need for specific PPP laws to address the casual and improperly managed aspects of PPP projects.

Heather N. Goldsmith focuses on another neglected socio-economic phenomenon: violence against women and children that are still rampant in Bangladesh. While Bangladesh has fairly strong laws, including life imprisonment, for rape or acid attacks, which are considered crimes against the state and must go to the courts, 90% of such cases end up in compromise with some women returning to an abusive husband or even to an alleged rapist. The lack of proper social services, extreme poverty, and a patriarchal structure of society are deemed as salient causes of such atrocities perpetrated on women. The author examines how human rights based mediation and counseling might ameliorate the horrific transgressions.

Finally, Monir Shaikh addresses the idea of crop choice as a means of mitigating the adverse impacts of climate change. Given the vulnerabilities of Bangladesh to climate change related extreme events, the author finds that farmers are quite cognizant of the impending challenges and make necessary and appropriate adaptations by shifting major cropping patterns if climate change scenarios can be predicted properly. The author contends that such adaptation strategies can be incorporated into the relevant policies of the government.

Now in its sixteenth year, JBS continues to strive to

bring contemporary policy relevant articles to its readers. Our efforts have led to several strategic gains in recent times. In addition to being available at Berkeley, Columbia, Cornell, Cambridge, and Rice University, recent additions to our subscriber base include New York University, Princeton University and The London School of Economics. This is exciting development and motivates us to bring JBS into the global policy environment more resolutely. The JBS editorial board is also working out an arrangement presently with The Pennsylvania State University Press to publish and publicize JBS to a wider audience.

These new developments indicate the strides we have made and urge us to instill even higher quality into the journal and the articles we publish therein. We, thus, invite contemporary articles adopting state-of-the-art-research methodologies to push the frontiers of knowledge on issues concerning Bangladesh and help us make JBS the premiere journal of choice for policy makers involved with the affairs of Bangladesh. We are especially keen to include articles written not only by scholars but also by practitioners whose insights can enrich the policy debate and bring in a multidisciplinary perspective.

It is important to close with a word of thanks. Recently JBS has moved to a completely new format using a new software. In this regard the work of Sukomal Modak, Partha Modak and Seema Modak in facilitating this transition has been indispensable. JBS recognizes their toil and dedication with deep appreciation. The BRAC Institute of Languages (BIL) at BRAC University also extended support by editing many of the articles. Deep appreciation goes to Farrah Jabeen and her team.

Syed S. Andaleeb
Editor

Challenging Injustice: Experiences with the Political Economy of Policy Influence

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1 An Intellectual Odyssey

I feel greatly honoured at being designated as the first recipient of the lifetime achievement award by the *Bangladesh Development Initiative* (BDI).

Most of my professional life has been invested in working with others, as part of a shared enterprise. My early career, beginning in October 1957, as a teacher in the Department of Economics of Dhaka University, was a defining period of my life. Dhaka University played an important role in the struggle for democracy and self rule for Bangalis and the Department of Economics played a vanguard role in this struggle. Whatever recognition I achieved at the time needs to be shared with my colleagues and indeed my students who were on the front-lines of the struggle.

In the post-liberation period I was associated with my life long comrades, Nurul Islam, Mosharaff Hosain, Anisur Rahman and Muzaffer Ahmad in building up the Bangladesh Planning Commission. In the 1980s I was again associated with a new generation of young economists in rebuilding the *Bangladesh Institute of Development Studies* (BIDS) into an institution of excellence, which was recognized around the region for its work. Since 1993 I have again been involved in building up the Centre for Policy Dialogue (CPD), which also involves bringing together large numbers of people from various walks of life, to address issues of policy concern in Bangladesh and the region.

At the end of 56 years of my professional life, whatever little I have achieved owes to my commitment to stay and work in Bangladesh as part of a shared enterprise, whether in my own work as an economist, in my efforts at building institutions or in my political involvements. In recognizing me today you are, therefore, recognizing an entire generation of Bangladeshis as well as the institutions with which I have been associated.

In my address before you I intend to touch on two aspects of my professional life and works, the unifying thematic focus of my efforts to influence public opinion and

policymaking. My works, whatever may have been their quality or final impact has focused, in one form or another, on the mission of challenging injustice in its various forms.

Since the nature of this mission touched on concerns which were shared by a large constituency of people my work was always intended to provoke public debate rather than promote my academic advancement. I, therefore, invite you to share a journey through my professional work to provide some understanding as to why I have chosen to address the issue of injustice and the outcome of my endeavours. In the course of this intellectual journey you will, hopefully, be exposed to the intellectual concerns of an entire generation of Bangladesh society and derive some insights into the scope for research to influence public actions.

In my recollection, from the outset of my professional life in 1957, Bangladeshis have been preoccupied with the issue of injustice. We have been held captive, as a people, within layers of injustice which have narrowed the opportunities and abridged the lives of large numbers of our citizens. Before 1947 our peasantry were prisoners of injustice perpetuated through the hegemony of the zamindars and their debt slavery as also through a process of communal subordination. After 1947 we were the victims of injustice through the usurpation of our democratic rights by a Pakistani ruling elite. In post-liberation Bangladesh large segments of our population remain victims of both societal and governmental injustice. The people at large remain witness to growing inequalities in the ownership of wealth, through unequal access to state patronized resources and unequal participation in the market economy. This inequitable access to resources and opportunities originates in an unjust process of governance operating within a malfunctioning democratic process.

In such a system the people of Bangladesh have been unable to realize their full potential and have been held captive within the policy hegemony of our development partners. This externalisation of our policy agendas itself originates in our being embedded within an unequal

international economic order. This unequal international system spills over into the South Asia region where we are caught in a pattern of inequitable regional relations.

In the context of our historical circumstances it is therefore not surprising that injustice should figure prominently not just in the concern of economists but in much of our contemporary political discourse and even in our literature. Rather than take you through a review of perspectives on injustice across the intellectual horizon of Bangladesh I thought it might be useful to expose you to my own intellectual odyssey as an example of how the issue of injustice impinged on my professional work.

Exposure to real life struggles with various forms of injustice gradually educated me on the need to explore the structural feature of society which creates and reproduces injustice. Structural injustice in my use of the term, derives from the inequitable distribution of opportunities to participate in the benefits of both democracy and development. This inequity originates in the unjust workings of the market, inequitable access to productive resources and the undemocratic distribution of power. It was this concern with structural issues which moved me away from working on the technical aspects of economics and located my work within the broader interdisciplinary concerns of political economy.

My preoccupation with the issue of structural injustice made it difficult for me to confine myself to a purely academic life since addressing such issues involves taking up political positions. It was thus not surprising that academics such as myself, who were on the frontline of the politically explosive debate on regional disparity, would be drawn into involvement with the political movement for self-rule for the Bangalis, which culminated in my participation in the Liberation War. It is this same concern with structural issues which has kept me involved in the arena of policy debate whether at BIDS or in my endeavours at the Centre for Policy Dialogue.

2 Correcting State Injustice

In the Dhaka of 1957, when I began my professional life at the Economics Department of Dhaka University, the unjust nature of the Pakistan state was apparent not just to students of the Pakistan economy but intruded into all forms of political and public life. The issue of the economic deprivation and political subordination of Bangalis within the Pakistan state was the dominant theme of democratic politics, media discussion and in the Teachers Common Room of Dhaka University. As economists we engaged ourselves with the economic dimensions of the problem but all discussions ended in arguments about the undemocratic and discriminatory nature of the Pakistan state. Prof. Abdur Razzaq, "Sir" to all of us, was an im-

portant source of education to many of us on the nature of the Pakistan state.

My first exposure to the working of the Pakistan state, in 1960, when I was just 25 years old, originated in an article on the economy of East Pakistan I was invited to contribute to a volume on the state of East Pakistan. The volume was commissioned by the *Bureau of National Reconstruction*, a body designed to strengthen inter-regional relations but mostly intended to propagate the good works of the Martial Law regime of Field Marshal Ayub Khan who had seized power in October 1958. My article was not a scholarly effort but it pointed out the deficiencies of governmental policy and the consequential deprivation of East Pakistan. The volume mostly contained pieces highlighting the positive developments in East Pakistan so that my own contribution appeared as an outlier when the work was published. My article must have attracted the attention of people of authority in the government because the volume was immediately withdrawn from publication and subsequently re-published, *sans* my article, which was replaced by a more "positive" paper by Dr. Abdullah Farouk, a teacher in the faculty of Commerce at Dhaka University.

The issue of economic deprivation of East Pakistan and its manifestation in the perpetuation of economic disparities between East and West Pakistan originated in the structural injustices which characterized the nature of the Pakistan state. The principal sources of disparity originated in the monopoly of political power in Pakistan exercised by a West Pakistani-based ruling elite, through the denial of the democratic rights of the Bangalis who constituted a demographic majority in Pakistan. The suggested remedy propagated by Bengali economists for the problem of economic disparity was a constitutional separation of political powers and policymaking between East and West Pakistan, through the granting of the right of self rule to the people of East Pakistan.

The concept of separation of powers in the Pakistan state had already been articulated through the *21-point programme* of the United Front of political parties challenging Muslim League rule in the 1954 elections in East Bengal. It could be argued that the pre-occupation of a number of Bengali economists with issues of regional disparity had been inspired by the focus on this issue by the political leaders of Bangali nationalism who provided a ready audience for their writings on this issue. The *6-point agenda* for self-rule for the Bangalis, presented to the world by *Bangabandhu* Sheikh Mujibur Rahman in 1966, which largely focused on economic issues, was the ultimate expression of this informal interface between the Bengali economists and our political leaders.

For the historical record, I had no contribution in the drafting of the 6-points but was happy to have contributed

to the intellectual debates which underwrote the struggle for self-rule. My own concern with self-rule originated in my involvement as a teacher of economics in Dhaka University, with the intense political debate over regional disparity during the 1960s. My earliest professional work, which gained any recognition, dates from 1961, when I made my first public presentation on the theme of two economies at seminars in Dhaka and Lahore. My presentation at a seminar in Lahore in September 1961, on the need to address the unique problems of a single polity with two economies, through conceding complete regional autonomy to East Pakistan, was headlined and reproduced in full in the premier English daily in Dhaka, the *Pakistan Observer*. Such ideas were hardly original to me. Other Bangladeshi economists such as Prof. Abdur Razzaque, Dr. Sadeque, Prof. M. N. Huda, Prof. Nurul Islam, Prof. Mosharraf Hossain, Prof. Akhlaqur Rahman, Prof. Anisur Rahman, Prof. Abu Mahmood, Dr. Habibur Rahman and quite a few other intellectuals contributed to this debate. I was, however, at the age of 26, privileged to project this theme to a wider audience because I had the inclination and opportunity to speak out, at a time when Pakistan was still under its first exposure to Martial Law, on an issue which touched on the concerns of all Bangalis. Under Martial Law at that time, political leaders were gagged from speaking on political issues and most academics were inhibited about publicly challenging the official mythology of national integration in Pakistan.

My work on the issue of correcting the injustice of regional disparity persisted through the 1960s. Most of this appeared as popular journalism. My most provocative writings on the issue of disparity and self-rule appeared in the columns and editorials of the weekly *Forum*, edited by Hameeda Hossain and myself, during the exciting days of 1969–1971. However, the most comprehensive summation of my work on regional disparity is to be found in the chapter I contributed to the 3 volume History of Bangladesh on the theme of the “*Economic Background of Bangali Nationalism*,” published in 1992 as part of the *History of Bangladesh* published by the *Asiatic Society of Bangladesh*.

My preoccupation with the theme of disparity eventually brought me, along with a number of Bangali economists and academics at Dhaka University, into political conflict with the Pakistani rulers and policymaking establishment. This inevitably led to our direct association with the political leadership of the Bangali nationalist movement and involvement in the liberation struggle. By the time Nurul Islam, Anisur Rahman and myself were invited to be members of the Panel of Economists reviewing the Pakistan’s Fourth Five Year Plan in 1970, we were engaged in a political struggle and not just an academic exercise.

After the overwhelming victory of the Awami League in the 1970 elections, Bangabandhu invited Nurul Islam, Anisur Rahman and myself, along with Muzzafar Ahmed Choudhury, Sarwar Murshed and Kamal Hossain to sit with him and his party high command to discuss the drafting of a constitution based on 6-points. This involved considerable and often quite technical discussions on operationalising some of the 6-points such as separate currencies and autonomous conduct of trade and aid relations. These were areas where the discipline of economics had to interface with the realities of Pakistani politics and Bangabandhu, along with the politically astute and intellectually brilliant Tajuddin Ahmed, greatly enhanced our understanding of what political economy meant in practice.

My political involvement, along with my writings in *Forum*, must have been taken seriously by the Pakistani Junta who accorded me the privilege of sending a troop of the Pakistan Army to arrest me from my home on the afternoon of 27th March 1971, just 2 days after they launched their genocide on the people of Bangladesh. That I am here to receive this award today suggests that the effort by the Pakistani junta was not successful. I was therefore invested with the privilege to spend the 9 months of the liberation war in 1971 as the Special Envoy of the Government of Bangladesh, campaigning abroad for the withdrawal of foreign aid to Pakistan and for the recognition of the right of Bangladesh to be a sovereign state.

The emergence of Bangladesh as a liberated nation state was the culmination of involvements of academics such as myself in using our research skills in support of a political agenda. The graduation of colleagues such as Nurul Islam, Mosharaff Hossain, Anisur Rahman and myself from academics trafficking in the discipline of political economy into the direct political ambit, albeit at a modest level, of national leaders such as Bangabandhu and Tajuddin Ahmed, greatly enhanced the reach and impact of our ideas. None of us could exercise a similar degree of influence on politicians and policymaking in later life when we were more established and mature researchers.

3 Correcting Rural Injustice

In the 1960s the infamous system of Basic Democracies (BD) was evolved by Field Marshal Ayub Khan to perpetuate his autocratic rule in Pakistan and underwrite the denial of political justice to the Bangalis. In 1966 I published my first book on “*Basic Democracies, Works Programme and Rural Development in East Pakistan*.” This book is out of print but I am told it is still cited by some scholars of rural development. Here again I addressed the issue of injustice inherent in the unequal distribution of

political and social power in rural East Pakistan. This inequity was perpetuated by the system of Basic Democracies, which located power, through the Union Councils, in a rural elite. The BDs were used as a political instrument to perpetuate the authority of the Ayub dictatorship through official patronage provided through the *Rural Public Works Programme*, funded under the *US PL 480* food aid programme to Pakistan.

The book had some impact on the political debate within Pakistan to the extent that it exposed the use of patronage as a crucial resource in building a power base for the undemocratic Ayub regime in East Pakistan. When the Ayub regime and its local satraps, led by Governor Abdul Monem Khan, came under attack at the end of 1968, just prior to its demise, the same Basic Democrats became the most proximate target of the anti-Ayub mobilizations in the rural areas.

Today, rural elites in Bangladesh are no longer dependent on land for their exercise of authority and draw on more diversified sources for their affluence and influence. They remain more integrated with mainstream political parties whose access to power remains a critical variable in their exercise of local political power and opportunities to accumulate wealth. To this day, however, food aid continues to be used by the government of the day as a political resource where it serves to reinforce the authority of those fractions of the rural elite who exercise local power at the time.

My attempt through my work on the BDs, to argue for a more democratic rural society drawing on the support of the poor peasants, resonated at that time but has had little impact on public policy in post-liberation Bangladesh where rural society has remained unequal even if the sources of inequity have mutated. In the three years immediately after the liberation of Bangladesh, when I was a member of the first Planning Commission, we attempted to promote agrarian reform and established a Commission to spell out the scope and nature of such reform. Our recommendations, which were rather modest in scope, were put on the shelf by Bangabandhu the then Prime Minister. When we reintroduced such an agenda for agrarian reform within the First Five Year Plan document he again asked us to excise any specific recommendations for such reform from the Plan. He argued, as he did earlier, that such reforms may be justified but were politically unpropitious because the richer peasantry who may be affected by the reforms remained an important part of the regime's rural support base. As it transpired, Bangabandhu, within the framework of his BAKSAL agenda, attempted to introduce an even more radical agrarian reform based on the *Tebagha* concept of sharing the produce of the land three ways between the owner, the tiller and the state. His reform efforts came to an untimely end along with his life

and the subject of agrarian reform has never since been restored to the policy agenda.

Agrarian reform in Bangladesh has, indeed, virtually disappeared from the policy landscape and even the development discourse across the world. A few heroic souls wrote about the issue but the subject appeared to have been buried. I was, thus, happy to be invited by FAO in 1982, to explore the scope for a second generation of agrarian reforms in the Philippines. Based on visits to the country I prepared a report on "*Agrarian Reform in the Philippines*." The report was well received among more radically minded Filipinos such as Prof. Renato Constantino who offered to publish it but less so by the regime of President Marcos who were never really interested in using agrarian reform as an instrument of structural change.

I was encouraged by my work on the Philippines to broaden my interest in agrarian reform through further work on the issue. This, more comprehensive global study appeared as a book, "*Agrarian Reform and Social Transformation*," published at the end of the 1980s by Zed Books. In this later volume, I argued that without a comprehensive agrarian reform, on a scale which could effectively correct the structural inequalities which characterise rural society, it would become much more difficult to democratize the polity, substantively eradicate poverty and ensure sustainable development in most developing societies. This work also failed to generate any substantial debate at the academic or political level because, during the 1990s, agrarian reform was completely outside the policy landscape.

My latest effort to resurrect the issue of agrarian reform is attempted in a chapter of my work on *Challenging the Injustice of Poverty in South Asia*. As a follow up to this work I have been travelling around the South Asia region to encourage like-minded civil society elements to at least set up citizens commissions to revisit agrarian reform in the prevailing circumstances of their respective countries. We have persuaded groups in India, Nepal, Sri Lanka and in Bangladesh to set up such commissions. In Bangladesh, at least, a positive effort is underway. How far these civil society initiatives will encourage governments in the region to explore such possibilities remains uncertain.

4 Correcting Injustices in the Ownership of Wealth

One of the principal preoccupations in the period of Pakistani rule was the injustice inherent in a system of public policy and state patronage which led to the concentration of economic power within just 22 families. Since 21 of these 22 families were non-Bengalis, our leaders such as

Bangabandhu and Tajuddin were conscious of the need to construct a more egalitarian society, at least, within Bangladesh. Bangali economists such as Anisur Rahman, Mosharaff Hossain, A.R. Khan, Swadesh Bose and I addressed distributional issues in our work. I wrote a paper on this subject in 1964, titled *Beyond Disparity*, which invited East Pakistan's political leaders to recognise that issues of social injustice at home were no less important than our quest for regional justice.

In the 1960's such issues as agrarian reform were still on the political agenda. When Prof. Mosharaff Hossain and myself were invited to become members of the Panel of Economists to review Pakistan's Third Five Year Plan we argued for the need to address issues of agrarian reform. We aspired to challenge the feudal order which still dominated West Pakistan inspite of some mild land reforms enacted by the Ayub regime in their early years in power. These feudal elites were part of the ruling alliance which controlled the undemocratic Pakistan state. Our rather obscure efforts to introduce some distributional content into the Third Plan did not go unnoticed. The Panel was put under pressure by the then Governor of West Pakistan, the Nawab of Kalabagh, one of the most powerful feudal lords of the Panjab, to withdraw any reference to agrarian reform, from our report. When Mosharaff and I refused to demur to the request of the Chairman of the Panel to modify our views on the subject of agrarian reform the entire Panel of Economists was unceremoniously wound up and no Panel report was published.

Whilst our principal policy preoccupations in the 1960's remained focused on the issue of challenging regional injustice a number of Bengali economists argued that we should also stay focused on issues of social justice. When Kamal Hossain, Nurul Islam, Anisur Rahman and myself were invited to prepare the Awami League's election manifesto for the 1970 elections, with the full backing of Bangabandhu and Tajuddin Ahmed, we introduced a strong egalitarian orientation into the document. Bangabandhu's concern with issues of social justice were inspired by his recognition that in the coming struggle for self-rule for the Bangalis he needed to mobilize the total support of the common people behind a manifesto which would be sensitive to their concerns.

In the post-liberation period when these same economists were inducted into the Planning Commission by Bangabandhu we were, thus, already sensitized to the need to democratize the ownership of wealth in an independent Bangladesh. Our perceptions were sharpened by the recognition that the liberation war had crucially depended on the support of a broad segment of the population who bore the brunt of the sacrifices and loss of life in the struggle. This awareness also permeated the consciousness of the political leadership. The policy response

of correcting injustice through public ownership, was itself driven by the pragmatic need for the Government of Bangladesh, to assume control over 40% of manufacturing assets and other business ventures in the financial and commercial sector, which were abandoned by their Pakistanis owners who fled from Bangladesh just prior to liberation.

In the beginning of the 1970s, the move to address structural issues such as the control of the economy by expatriates and the concentration of economic power, through the extension of public ownership, was accepted practice throughout the Third World and hardly unique to Bangladesh. Subsequent experiences with public enterprise in these countries, including Bangladesh, as also in the former socialist world, revealed that public ownership was not necessarily synonymous with democratizing the ownership of wealth. The politically influential, in collusion with the state bureaucracy, located within the specific political economy of a country, could also monopolise the control and benefits of state owned wealth. In particular societies where democratic accountability and transparency of the state were weak, the monopoly of economic wealth in the hands of the state, perpetuated both inefficiency and corruption.

All these lessons have been learnt from the benefit of hindsight. My initial work in the post-liberation period arose out of my involvement in the Planning Commission on policy issues related to the deconcentration of wealth. This was captured in the subsequent research work I initiated in collaboration with Prof. Muzzafer Ahmed on "*Public Enterprise in an Intermediate Regime: A study on the political economy of Bangladesh.*" Our work drew on our first hand exposure, during our days in the Planning Commission between 1972–1974, to the struggles to contain the rent seeking proclivities of political elites in that period which served to undermine the viability of various public institutions.

On the way we learnt a great deal about the power struggles with the bureaucracy and the determination of the senior bureaucrats to deny entrepreneurial autonomy to the professionals brought in to ensure the commercial viability of public enterprises. This battle came to naught as Bangladesh's public enterprises were kept imprisoned in bureaucratic red tape and exposed to ruthless rent seeking which condemned them to mounting losses which were subsequently used as justification for their closure or privatization.

Our work on public enterprise in the second half of the 1970s, which was published by BIDS in 1980, was followed up by other writings by me in this area, which addressed the issue of the nature of the underlying political economy of the state. This perspective was seen as a useful analytical mechanism for addressing the assump-

tions and outcome of policies promoting the extension and eventual malfunctioning of state enterprises.

5 Correcting Injustices in the Global Economic System

The global economy was then and today remains a deeply unjust arena where the advanced industrial countries controlled markets and monopolized access to capital. The search for a *New International Economic Order* (NIEO) was part of an ongoing global discourse in the 1970s to correct these injustices in the global system. I contributed to this debate through my work initiated at Queen Elizabeth House, Oxford, at the end of the 1970s, addressing the injustices in the prevailing international economic order. I was particularly excited by the opportunities provided by the redistribution of global wealth towards the oil exporting countries through the rise in oil prices, which I viewed as a unique opportunity for the Third World to breach the monopoly of financial power exercised by the North. In my writings I attempted to argue that the prevailing economic order was rechanneling this oil wealth in the hands of the energy exporters, back into the international financial system through the financial institutions based in a few advanced industrial countries. I argued that the oil exporting countries should redirect more of their wealth, mostly invested or being lavishly spent in the North, to diversify and strengthen the development capacities of the South through promoting greater collective self-reliance within the Third World. Such a redirection of resource flows within the South would contribute towards initiating a process of structural change in the unequal distribution of global economic power.

I attempted to project my work before international audiences who were engaged in the debate over NIEO. What I regarded as my best work on this subject which was done at the *Centre for Research in the New International Economic Order* (CENRNEO) at Oxford, was targeted at the *OPEC Special Fund*, the think tank of OPEC, based in Vienna, which was best placed to reach these ideas to the OPEC policymakers. I also travelled to Saudi Arabia, Kuwait, UAE, Jordan and Bahrain to try to interest key policymakers on the advantages of using OPEC surpluses to strengthen South-South solidarity. I attempted to use platforms provided by international institutions and also the Arab Thought Forum, a politically influential think tank in the Arab World, to propagate my message.

Regrettably, endeavours by me and others involved in propagating a NIEO were largely infructuous. I found that policymakers in the OPEC countries, at that stage, believed their wealth was safer in the hands of bankers in Wall Street and the City of London. The strategic stran-

glehold of the United States over these countries also appeared to be critical in persuading them to recycle their capital through the financial market of their political patrons. As I predicted in my work, OPEC's surpluses became hostage to US politics and were substantially eroded by the mid-1980s due to the induced recession in the US economy and the planned depreciation of the dollar.

I notice today that a new round of opportunities for the South has emerged from the Asia region, led by China and India, where two-thirds of the global reserves are now accumulated. In a recent work I argued that this Asian economic renaissance, led by China, originates in the intrinsic competitive strength of the Asian economies in an age of globalization. This structurally derived economic power is more likely to grow over the years investing these countries with greater autonomy in reconstructing a more balanced global economic order. The earlier build up of reserves with the OPEC countries, originating in an inflation in energy prices, was compromised by their structural embeddedness with the major powers of the Western world.

6 Correcting Regional Injustice

In post-liberation Bangladesh, in our days in the Planning Commission, one of our primary concerns was the need to correct the structurally unequal pattern of Bangladesh's relations with our large neighbour India. Our proposed policy agenda was to enhance and diversify Bangladesh's export capacity through unrestricted access to the Indian market. This would lead to a more balanced pattern of economic relations and a more sustainable basis for political relations. As a Member of the Bangladesh Planning Commission in 1972, I was designated as the lead person to interact with my counterpart Member of the Indian Planning Commission, Professor Sukumoy Chakravarty to develop a mutually beneficial pattern of economic relations between our countries. In this process I came to recognise that it was largely in Bangladesh's interest to restructure this relationship as India, with a far stronger economy, was content to let the relationship be governed by market forces.

I worked with the chairs of various Sector Corporations in Bangladesh to develop large scale industrial projects based on adding value to Bangladesh's then abundant gas resources, in order to enhance and diversify our export capacity to India in such areas as fertilizer, sponge-iron and cement. Feasibility studies of these projects were prepared and approved by Bangabandhu and Indira Gandhi at their bilateral summit in Delhi in May 1974. With the murder of Bangabandhu and the resultant regime change in 1975, our ideas of bringing about a more structurally balanced pattern of economic relations with India were put into cold storage by successor governments

in Bangladesh. Over the next 4 decades, as we anticipated, our economic relations with India were driven by market forces whereby Bangladesh's trade deficit with India has grown to a level of US\$5 billion. My ideas on Indo-Bangladesh relations were captured in my P.C. Joshi Memorial lecture presented in Delhi in 1988.

In the absence of any state led initiatives to restructure our economic relations with India we engaged ourselves, through civil society dialogues, to argue for duty free access for Bangladesh's exports to India. We argued that India's open markets would incentivize Bangladesh's now more developed private sector, to step up exports to India and build partnerships with their counterparts in India to enhance and diversify our export capacity.

We located our attempts at stimulating Bangladesh's exports within the broader policy framework of strengthening Indo-Bangladesh economic relations which had remained in the doldrums for close to a quarter of a century. To initiate such a process, the CPD partnered with the *Centre for Policy Research*, New Delhi, and later the *India International Centre (IIC)* to organize a series of Indo-Bangladesh dialogues to address various contentious issues, including the need to evolve a more balanced pattern of relations between an economically stronger India and a weaker Bangladesh. Between 1995 and 2012, 15 such dialogues have been convened in New Delhi and Dhaka involving senior political leaders such as I.K. Gujral, a former Prime Minister of India and their political counterparts in Bangladesh, with a cross-section of academics, professional and business persons in both countries. These dialogues drew upon ongoing research on the issue which was encouraged by our dialogue process. We argued in our dialogues that if governments remained inhibited about breaking this protracted impasse in inter-state relations civil society in both countries should take the lead in identifying the source of particular problems and developing constructive alternatives to resolves these issues.

This dialogue process has made some modest contributions in creating a more propitious climate for resolving disputes and has made a model contribution to the conclusion of a treaty in 1996 to share the Ganges waters and in current moves to build greater connectivity.

The quest for realizing duty-free access for Bangladesh's exports to India was a recurring theme of our dialogues where some of the most persuasive arguments for our case were provided through research papers prepared not just at CPD but also by our Indian friends such as Professor Muchkund Dubey, once Foreign Secretary of India. Our endeavours registered incremental gains when alumni of our dialogue process such as I.K. Gujral ascended to the position of Prime Minister of India. It was, however, not till 2012, that Dr. Manmohan

Singh who, as Finance Minister of India had engaged with us in the first Indo-Bangladesh dialogue in 1995, in his current capacity as Prime Minister, finally conceded to full duty free access for Bangladesh's exports. India has now also agreed to the virtual elimination of the *sensitive list* which had rendered earlier duty concessions for Bangladesh largely ineffective. The Indo-Bangladesh dialogues serve as a modest testament to the possible role which both academic research and an empowered civil society can play in influencing inter-state relations.

I extended my concerns for enhancing and diversifying Indo-Bangladesh relations to the goal of reconstructing a South Asian economic community on the lines of the European Community and ASEAN. In this endeavour we had many partners across the region. Beginning in 1978, when at Oxford, I initiated work on correcting regional inequity in South Asia through economic cooperation. My main concern was to find ways to apply the same logic, which guided my approach to Indo-Bangladesh relations, to correct the structural inequalities between the more developed countries of South Asia such as India and the structurally underdeveloped economies of the region. In order to correct these structural inequalities we needed to construct a South Asian economic community where the weaker economies of South Asia, such as Bangladesh, Nepal and Sri Lanka could be empowered by diversifying their production base and exports through provision of unrestricted access to the much larger markets of India and also Pakistan. As part of such a process South Asia needed to come together to build an association for regional cooperation. Our ideas were the forerunner of the emergence of SAARC.

To build political support for an agenda for South Asian cooperation we brought together some of the leading think tanks and academic institutions in the region to develop a well researched agenda for regional cooperation. I collaborated with a number of well known regional institutions and personalities in such fora as the *Committee for Studies on South Asian Development (CSSAD)* and *South Asia Dialogue*. Our efforts culminated in the founding of the *South Asia Centre for Policy Studies (SACEPS)*, in 2000. In its initial years SACEPS was located in Dhaka with CPD as its Secretariat and as its Executive Director till 2005 I was invested with the responsibility of building up the organisation. SACEPS is today the leading civil society think tank in South Asia with the ongoing mission of promoting South Asian cooperation.

The SACEPS initiative is a good example of civil society using research to try to influence public policy. CPD once again drew upon research to partner with other regional institutions to promote sub-regional cooperation which brought together India and Bangladesh with China and Myanmar. As a continuation of my earlier works on

South-South cooperation and Indo-Bangladesh cooperation I published two books, *Transforming Eastern South Asia* and *Rediscovering the Southern Silk Route* which argued that South Asia should forge economic ties with the fast growing, resource rich, Asian region to its east. Our efforts culminated in the *Kunming Initiative*, built around a sub-regional grouping, involving Bangladesh, India (mostly North-East India), Myanmar and China's Yunnan Province, known as the BCIM group, with its Secretariat in Kunming. This civil society initiative has drawn the political support of the governments of China, Bangladesh and Myanmar to evolve the grouping into a more formal inter-state entity. India has remained rather lukewarm to institutionalizing the BCIM but is coming round to the idea as its own economic relations with China intensify.

7 Aid Dependence and Policy Ownership

Over the last 40 years, first in Pakistan and then in Bangladesh, aid dependence has been a crucial feature in our national life. Pakistan's development partners, led by the US and the World Bank, exercised considerable influence over the politics and policies of the country. Along with other colleagues at Dhaka University such as Anisur Rahman and Abu Mahmud, we argued that this external aid leverage served to distort Pakistan's development priorities which aggravated both inter-personal and regional inequalities. Furthermore, aid flows both served and were used to politically perpetuate Ayub's autocratic regime.

During the 1960s I pointed out both in my academic and journalistic writings the hegemonic role of aid donors over policymaking in Pakistan. Apart from the role of US aid I emphasized the larger than life role exercised by the US supported *Harvard Advisory Group* located within the Planning Commission, over Pakistan's planning process. The growing ascendancy of the World Bank over Pakistan's policy priorities was also becoming increasingly evident. This dependence of Pakistan on external aid influenced my role during the liberation war in 1971 when the Bangladesh government appointed me as Envoy Extraordinary for economic affairs, with the specific mission of organizing a global campaign to stop aid to Yahya regime as a leverage to desist from their genocide in Bangladesh.

This exposure to the transcendental role of foreign aid over the politics and economics of Pakistan influenced the thinking of all members of the first Planning Commission of Bangladesh, where my three other colleagues, Nurul Islam, Mosharaff Hossain and Anisur Rahman had been similarly conscientised. Our perceptions and concerns were shared by the leadership of the post liberation

government where Bangabandhu and particularly Tajuddin Ahmed were particularly aware of the need to establish greater sovereignty over Bangladesh's policy agencies.

The political concerns of our leaders were given substance by the political pressures exercised by the principal donors over the issue of Bangladesh accepting a share of Pakistan's debt liabilities even before its had recognized the sovereignty of Bangladesh. The background and outcome of such exercises in power diplomacy have been effectively captured in the seminal work by Nurul Islam and Just Faaland, *Aid and Influence*. Such pressures in using aid as an instrument of policy and political leverage culminated in the withholding of not just food aid but also other forms of aid to Bangladesh by the US government and also the World Bank during 1973–1974 which contributed to the terrible famine of 1974. I wrote about this infamous episode in an article published by *Economic and Political Weekly* (EPW), *The Politics of Food and Famine*, which appeared in December 1979. In 1982, I published another work, the first of several, on the issue of aid dependence and policy ownership, *The Crisis of External Dependence*. This work drew upon our experiences in the Bangladesh Planning Commission between 1972–1974, when we were exposed, first hand, to the problems of re-establishing autonomy from donor agencies over Bangladesh's policy options.

This issue of external dependence has continued as a recurring theme in my work over the last 20 years. The issue of external dependence was also viewed by me as a structural issue, associated with the issue of policy ownership, which I deemed to be no less important than the ownership of productive wealth. In my work on aid dependence I addressed the implications arising out of the hegemony of our principal aid donors over policymaking on the governance and sustainability of the development process in Bangladesh.

My work on the tensions of aid dependence has attracted some attention in the global development community where I have acquired a minor reputation as an aid agnostic. I was, thus, invited by SIDA, in 1993, to explore the implications of aid dependence in Tanzania. When I visited the country that year I met a number of people both from the government and academic community, including the former President, Julius Nyerere, who were concerned with the growing influence of aid donors over policy. I was interested to observe many similarities in their experience with that of Bangladesh in its more aid dependent years. I wrote about this experience in a book, *Aid Dependence and Donor Policy in Tanzania*. Today, while Bangladesh has drastically reduced its aid dependence, Tanzania as is the case with many countries in Sub-Saharan Africa, remains heavily aid dependent and

exposed to structural atrophy originating in the policy regimes imposed on them by their principal aid donors.

My works on external dependence not only looked at the structural features of aid dependence, such as low savings and weak governance, but also addressed the limitations of implementing a process of structural adjustment reforms through the application of aid conditionalities. From the mid-1980's I was involved, through my writings, in a global debate challenging the market fundamentalism underlying the World Bank's agenda for imposing structural adjustment reforms on aid-dependent client states. Our main critique of these reforms was their failure to address the structural dimensions of developmental policy, the role of weak governance and the implications of lack of ownership over externally imposed reform agendas. It is interesting, indeed heartening, to note that the arguments posed by some of us, over the last two decades, about the need to prioritize structural issues, governance and above all, the importance of domestic ownership over the design and implementation of reforms, are now accepted as the new conventional wisdom in the World Bank and among most other aid donors.

The critical issue for Bangladesh has always been and remains our need and capacity to establish autonomy over our own development agendas. Apart from whatever research work I did in this quest my broader goal was to mobilize Bangladesh professionals to establish before the world that we have the professional skills to assume responsibility for setting our policy priorities. To this end, in my brief tenure early in 1991 as a Member of the first Caretaker government under President Shahabuddin I brought together 255 of Bangladesh's top professionals in 29 Task Forces to present policy recommendations to the incoming elected government on the policy options available to them. I believed that this enterprise would enable Bangladesh's democratic government to emancipate Bangladesh from the hegemony established over our policy agendas by our aid donors. The dedicated work of great quality, done at no cost to the state, by our professionals was unfortunately not put to effective use by the incoming regime so that donor influence over policy persisted for many years even when Bangladesh's dependence on aid declined significantly.

When we established CPD at the end of 1993 I once again sought to bring together Bangladesh's best professionals talents to interact with our political leaders through dialogues in order to establish Bangladesh's policy priorities. CPD was designed to bridge the gap between academic research and policy advocacy. In 1995, CPD initiated its flagship programme to prepare an *Independent Review of Bangladesh's Development* (IRBD). Over the last 19 years we have regularly published reports on the state of the economy and its stewardship as a

measure of accountability on the incumbent government. Prior to 1995 this task was traditionally performed by the World Bank. After the regular publication of the IRBD the World Bank ceased to publish its annual report. The IRBD, prepared exclusively by Bangladeshi professionals, has today been recognized as a standard reference on the state of the economy. The impact of CPD's IRBD has encouraged other institutions to engage in analysis of the economy. Today, the government of Bangladesh may not be as responsive to citizen's voices as we might hope but it is more inclined to draw upon indigenous policy research to set its policy options.

8 Structural Injustice and the Default Culture

Over the years the concept of the default culture has become part of the public discourse. This originates in the inefficiency and injustices associated with promoting private sector development in Bangladesh through state patronage. Beginning from the early 1980s, I worked on these issues at BIDS, with several younger colleagues such as Debapriya Bhattacharia, Binayak Sen, M. M. Akash, Ahmed Ahsan and Syed Akhter Mahmood, then at the beginning of their careers, who have since earned considerable professional recognition. We discussed the underlying dynamics of debt default in Bangladesh and the consequences of an indiscriminate approach to the privatization of public assets, in the prevailing structural context of Bangladesh. These writings argued that policies designed to promote private enterprise should be more sensitive to structural aspects of private entrepreneurship by looking into the social background of local entrepreneurs and their capacity to make effective use of publicly provisioned term loans and privatized assets. A system where structural weaknesses in both the private sector and the official regulatory regime are compounded by the politicization of the lending regime and the privatization process, is likely to malfunction.

Such an ill-governed system has served to perpetuate a default culture and has led to asset stripping, disemployment and eventual closure of many privatized units. This outcome is contrary to the assumptions underlying privatization policy because it does little to improve enterprise profitability, production or investment. It is also unjust because it locates public resource in the hands of a privileged few, who are left unaccountable for the productive use of public resources.

Today the default culture, which originated in the agenda of using public resources for patronizing these with political access, remains alive and well, as we witnessed recently in the malfeasant direction of a credit of Tk. 30 billion by the state-owned Sonali Bank, to a sin-

gle borrower of unknown provenance. However, unlike in the 1980s, a class of private entrepreneurs and banks has come of age, which can now engage in financial transactions autonomous of the state, which is no longer the prime mover of entrepreneurial development.

9 Governance and the State

The issue of malgovernance is also today part of the general discourse. In the 1990s I continued with my work on the role of the state but extended this to initiate work on the theme of governance, when this concept was less fashionable. In my work, including research initiated at CPD, we argued that the relevant issue was not the extent of state intervention in the economy but the quality of its policymaking and governance. The discourse on governance was designed to address the issue of what makes some states more effective than others. It was then believed that the East and South East Asian states were role models of good governance and successful development, compared to the South Asian states and most of Sub-Saharan Africa.

To expose Bangladesh to the issue of the governance in development CPD organized a major international conference in 1996 where we invited some of the top scholars on governance and development such as Robert Wade, Hajoong Chang a Korean teaching at Cambridge, Justin Yifu Lin from China, who later served as Chief Economist at the World Bank, and K.S. Jomo of Malaysia, amongst others. I persuaded Sheikh Hasina who had just been elected Prime Minister, SAMS Kibria, Finance Minister and Saifur Rahman the outgoing Finance Minister along with a variety of local public figures to attend the programme in the hope that they would be educated on the importance of getting governance right. The rich exchanges in this event were published as *“Learning from East Asia: Lessons for South Asia.”*

We now know, in the light of experience with the Asian financial crisis in 1997, that the East Asians were not as well governed as was believed by the World Bank and ADB, as well as many distinguished academics. In retrospect, it appears that the weakness of the governance discourse lies in its inadequate discussion of structural issues located within the political economy of a particular country.

10 Eradicating Poverty through Correcting Injustice

Poverty remains the major issue of our time and is now the priority concern of our aid donors. My ongoing work, during the 1990s and over the next decade, on poverty and injustice, addresses the less discussed issue of the structural

dimensions of poverty. This link between poverty and justice has led me to my current preoccupation with the role of structural injustice in perpetuating poverty and the political disempowerment of the poor. In my *Nazmul Karim Memorial lecture*, *“From Two Economies to Two Societies,”* my *Nurul Matin Memorial lecture* on *“Restoring Justice to Banking”* and my *Mahbabul Haq Memorial Lecture*, delivered in Ottawa in October 1998, on *“Restoring Justice to Development,”* I have focused on the need to rethink our approach to poverty by viewing it as the outcome of structural injustice rather than a deficiency of resources. In my IFAD/FAO public lecture in Rome in July 2001, on the theme of *“Eradicating Rural Poverty: Moving from a Micro to a Macro Policy Agenda,”* I took my work on injustice forward to initiate discussion on the strategies for eradicating poverty through correcting structural injustice by promoting greater democratization of economic opportunities. This initial work provided the basis for a 4 year CPD-SACEPS research project initiated under my leadership which culminated in my book on *“Challenging the Injustice of Poverty: Agendas for Inclusive Development in South Asia,”* which was published by Sage in October 2010.

In this volume I have argued for correcting injustice, through democratizing the ownership of wealth and the functioning of markets. This work, drawing on experiences with policymaking and structural interventions at the level of civil society in South Asia, addresses the need for:

- Expanding the ownership and control of the poor over productive assets
- Enhancing their access to a knowledge based society
- Strengthening the capacity of the poor to compete in the market place
- Redesigning budgetary policy to reach public resources to the poor.
- Restructuring monetary policy so as to move the poor upmarket to access resources from the macro-financial system and to design savings as well as investment instruments for the poor.
- Designing institutions for the poor to enable them to acquire ownership of wealth and effectively manage this wealth.
- Empowering the poor through widening their opportunities for political participation.

Since our work on challenging injustice was not just designed as an academic exercise but aspired to influence public policy and civil society activists, I undertook further work on identifying specific policies, programmes and projects, which could be used to operationalize the agendas for inclusive development proposed in my book. This work is under publication as a research monograph

by CPD and is being used by me as an instrument of policy advocacy both within South Asia and amongst international development organizations who are committed to ending poverty. I am currently engaged in discussing the ideas raised in my book on challenging injustice in order to mobilize support across global civil society for focusing public attention on incorporating issues of structural change into the post-2015 MDGs.

I have had occasion to discuss my work on injustice both at the research stage and since its publication, at a variety of fora at home and abroad with policymakers, politicians, business peoples, academics, NGOs and the international development community. In these discussions, I had naively presumed that since my ideas were hardly revolutionary, and could even be seen as mildly market friendly, my work would generate some resonance with relevant stakeholders engaged in promoting a more inclusive development agenda. So far my experience has been that my ideas on a structural approach to poverty eradication commands few sponsors in the development or the academic world, even among those who speak eloquently on issues of eradicating poverty and injustice. The universal policy approach to inclusion appears to be to address the symptoms of injustice through programmes of publicly funded social provisioning. I have discovered few backers willing to address the structural sources of poverty and to seriously engage with an agenda which seeks to challenge injustice.

11 Correcting Gender Injustice

Work on poverty and structural injustice needed to recognize the more pervasive injustice and deprivation imposed on women. This issue has spanned a sizeable literature and mobilized a powerful political constituency around the world, but in Bangladesh work in this area has been confined to a few women scholars, who have written strongly on the subject. I made my own exceedingly modest contribution to this discussion in my publication on *“Planning and Public Action for Asian Women”* which appeared early in the 1990s. I raised the issue of empowerment of women through introducing constitutional provisions to provide for greater representation of women in Parliament across Asia, but specifically in Bangladesh where they are massively underrepresented. My subsequent public presentations on gender deprivation have contributed as part of a popular movement in Bangladesh to enhance the representation of women in Parliament through direct election to reserved seats for women.

This movement at one stage led to a degree of mobilization amongst women’s groups to a point where the two

major political parties in Bangladesh incorporated commitments to legislate measures for directly electing more women into Parliament. Regrettably, once elected to office, neither of these parties have found it politically convenient to legislate a measure which would politically empower women in their own right. The party political leaders prefer to retain the power to nominate women to parliament in the expectation that these MPs would serve as loyal political clients of their respective leaders.

12 A Summation of My Professional Life

This journey through my professional life, indicates that I could never exclusively afford to be an academic economist. I always chose themes which were at the center of intense political contestation at the national or global level. My writings were, accordingly, always designed to contribute to these public policy debates. This has made my views on a variety of subjects quite well known, if not always attracting appreciation or agreement. I have felt strongly about the issues which seized my attention. I would like to believe that whatever may be the judgment of my peers on my qualities as an economist, they were at no stage left in any doubt about my views on any of the policy debates in which I involved myself. My hope for the present generation of Bangladeshi economists at home and abroad is that they will be more active in taking visible positions on issues of public policy. Such indeed was my advise to the economics profession in my Presidential Address to the *Bangladesh Economics Association* in July 1988, on the *“Social Role of the Economist in Bangladesh.”* A new generation of colleagues at CPD led by Debapriya Bhattacharya and Mustafizur Rahman, have taken up the challenge of mobilizing civil society to seek greater policy accountability and better governance from the state so my graduation from research into civic activism may not have been in vain.

In Bangladesh and indeed much of the Third World, the principal issue of the day is the need to challenge injustice which could thereby give the most deprived segments of the population a right to participate more equitably in the market, to resources, and to political power. I no longer aspire to do further academic work or to engage in global advocacy in the way I have done upto now. My hope remains that CPD and other civil society organizations engaged in civic activism may activate a younger generation to take forward the challenge of ending injustice drawing on greater professional capabilities, energy and political skill than lay within my capacity.

The Nature and Quality of Democracy in Bangladesh: An Assessment

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Abstract

This paper argues that since the democratization process began in 1991 Bangladeshi politics has shown symptoms of hybrid regimes. With serious shortcomings in governance in Bangladesh – from non-functioning of the parliament, absence of rule of law, politicization of the judiciary, extra judicial killings, etc. – the country’s transition from authoritarian to democratic norms in fact remains quite incomplete. The article uses empirical measurements instead of anecdotal evidence or subjective analysis to examine the “*hybrid regime*” phenomenon. Six defining characteristics form the basis of analysis: competitive elections, corruption, democratic quality, press freedom, civil liberties, and rule of law. To facilitate the processes of democratization, lest the country reverts to a de-facto one-party authoritarian state, the need for a strong and effective political opposition and a renewed interplay between ordinary citizens and the opposition is emphasized, in addition to developing a civic culture of engagement.

1 Introduction

In the past two decades, despite conducting several free and fair elections and being ruled by elected civilian regimes, Bangladesh has witnessed serious shortcomings in governance. Non-functioning of the parliament, absence of rule of law, politicization of the judiciary, unabated extra judicial killings, and a growing phenomenon of enforced disappearance have given credence to the argument that the nation’s transition to democracy from authoritarianism has remained incomplete. Some fundamental elements of democracy have remained elusive for decades, and the quality of governance is deteriorating at an alarming rate. Events since the 1990s show that the nation is in a state of perpetual political crisis.

Against this backdrop, the paper assesses the nature and quality of democracy in Bangladesh. I argue that Bangladesh displays emblematic features of “*hybrid regimes*” (Diamond 2002) — “*regimes [that] are neither a subtype of autocracies nor of democracies but a regime type on their own, encompassing those political systems that on plausible grounds cannot be classified as either autocracy or democracy*” (Bogaards 2009, Lauth 2002).¹

This paper draws on composite data of various elements of democratic governance and political culture to test the hypothesis and provides an empirical analysis of the quality of democracy in Bangladesh. I will utilize composite indices and country rankings currently available in the public domain. The objective is to assess the

extant political system vis-à-vis the dominant features of hybrid regimes.

Given the expansive nature of the definition of “*hybrid regimes*” the paper probes further into the causes of their emergence and the nature of democracy. This exploration leads to the conclusion that Bangladeshi democracy bears the defining characteristics of “*delegative democracy*” (O’Donnell 1994) — a system which “*rest[s] on the premise that whoever wins election . . . is thereby entitled to govern as he or she sees fit, constrained only by the hard facts of existing power relations and by a constitutionally limited term of office.*”

The paper will conclude with brief remarks on the crucial elements of maintaining hybrid regimes and an attempt to shed some light on the future trajectories of democracy in Bangladesh.

2 Democratization, Reverse Wave and the Hybrid Regime

The scale of the global move towards democracy beginning in the 1970s, underscored in Samuel Huntington’s seminal study, *The Third Wave* (Huntington 1991), gave rise to the idea that the ideological battle had been won by democracy. It was proclaimed, almost in a triumphalist manner, that the twentieth century was the age of democracy. Fukuyama (1991) went to the extreme insisting that we had arrived at the “*End of History*” in the Hegelian

sense.² These discussions also underscored that democratization is a process which has various stages and each of them warrants closer attention. Hence, “*theories of democratic transition*” emerged.

By the beginning of the twenty-first century, the primary euphoria associated with the “*third wave*” had subsided. A whole new set of studies and analyses expressed serious concerns that some democracies were not consolidating, but were actually rolling back. An array of studies have discussed this new phenomenon (see Carothers 2002, Diamond 2008, Nathan 2003, Ottaway 2003).

Researchers since then have demonstrated that while a number of countries have progressed towards democratic systems, some have since regressed to authoritarianism, and others have remained stagnant either by choice or by default. It was a stark contrast to the predictions of the transition thesis.

It has now become evident that some regimes had adopted constitutionalism and electoral processes to the extent that free, fair, competitive, multi-party elections were held at regular intervals and limited political rights and civil liberties were granted, but the essence of democracy — to allow the voices of people in governance — remained unfulfilled. This deficiency has been blamed on the unwillingness of the political class, irrespective of ideological persuasion. At this point it became evident that the binary frame to understand the state of democracy was unhelpful; consequently the question metamorphosed into how to describe these democracies?

Various adjectives are being used to describe these regimes; for example, “*semidemocracy*,” “*virtual democracy*,” “*electoral democracy*,” “*pseudodemocracy*,” “*illiberal democracy*,” “*semi-authoritarianism*,” “*soft authoritarianism*,” or “*electoral authoritarianism*” (Levitsky and Lucan 2002). Diamond (2002) has broadly described them as “*hybrid regimes*.” Increasingly it has come to be accepted that hybrid regimes are neither a subtype of autocracy nor of democracy but a regime type of their own, encompassing those political systems that on plausible grounds cannot be classified as either autocracy or democracy (Bogaards 2009, Lauth 2002). Hybrid regimes are not to be confused with regimes in transition. Hybrid regimes are a particular type of regime whereas a regime in transition is precisely that, a regime changing from one type to another (Diamond 2002).

3 The Nature of Democracy in Bangladesh

Drawing on discussions and differentiation between various elected civilian regimes, this paper assesses the nature of Bangladeshi democracy under the civilian regimes

(1991–2006, 2009–to date). Instead of anecdotal evidence and subjective analyses, we turn to empirical measurement, utilizing various composite indices and country rankings currently in the public domain. This model is developed following Ekman (2009). The idea is to identify the features that fit the hybrid regime profile noted in the available literature, i.e. political systems that combine regular democratic elections with a number of democratic deficiencies, such as corruption, lack of press freedom, and poorly working systems of checks and balances between the executive and the legislative branches of government.

We look into six defining characteristics of “*hybrid regime*” and measure the status of Bangladeshi democracy with available data. We have distilled these data by a specific *combination* of scores: relatively high scores when it comes to elections, but low scores when it comes to other democratic practices. In succeeding paragraphs, we will develop empirical measures for, in turn, competitive elections, corruption, lack of democratic quality, press freedom, civil liberties, and the rule of law. We use several sources, such as European Intelligence Unit’s *Democracy Index*, Freedom House’s *Freedom in the World*, Transparency International’s *Corruption Perceptions Index* (CPI), *World Press Freedom Index* by Reporters without Borders, Amnesty International (AI) and the United States’ State Department (USSD)’s Terror Scale data. Instead of using single-year data we have used average data over a decade. When available we have used data for two decades (1991–2011).

3.1 Competitive Elections

The condition of having free and fair elections is a basic requirement for a democracy. To establish the presence of a hybrid regime, by contrast, the requirement is closer to “*elections make a potential difference*.” Here, we have utilized the Economist’s *Index of Democracy* 0–10 scale, where 10 represents the top score. In order to make an assessment of the elections, the designers behind the Economist index have looked at a number of aspects. For example, are elections for the national legislature and head of government free and fair? Do opposition parties have a realistic prospect of achieving government positions? The average of past years’ score shows Bangladesh scores relatively highly on the category “*electoral process*” (6 and above) in the Economist index. Four years’ average is above 7 on a 10-point scale.

3.2 Levels of Corruption

In order to assess the levels of corruption, we have utilized the country ranking provided by Transparency International’s *Corruption Perceptions Index* (CPI).

Table 1: EIU Democracy Index

Year	Rank	Overall score	Electoral process and pluralism	Functioning of government	Political participation	Political culture	Civil liberties
2006	75	6.11	7.42	5.07	4.44	6.25	7.35
2008	91	5.52	7.00	5.07	4.44	3.75	7.35
2010	83	5.87	7.42	5.43	4.44	5.00	7.06
2011	83	5.86	7.42	5.43	5.00	4.38	7.06

Source: European Intelligence Unit, Economist, *Democracy Index*, Various Years.

Table 2: Level of corruption

Index									
2011	2010	2009	2008	2007	2006	2005	2004	2003	
2.7	2.4	2.1	2.0	2.0	1.7	1.5	1.3	1.2	

Source: Transparency International, *Corruption Perception Index Report*, Various Years, <http://www.transparency.org/research/cpi/overview>

Table 2 shows that on the CPI 1–10 scale, where 10 represents no corruption and 1 highly corrupt countries, Bangladesh scored 2.7 or below between 2003 and 2011.

3.3 Lack of Democratic Quality

By lack of democratic quality we meant the lack of checks and balances of government and government accountability. The Economist Index uses a series of data to arrive at an average score. These data are gathered through the following questions: Is there an effective system of checks and balances on the exercise of government authority? Are sufficient mechanisms and institutions in place for assuring government accountability to the electorate in between elections? Is the civil service willing and capable of implementing government policy? We have used an average of the four available index scores and used 6 as the cutting off point. Bangladesh has consistently scored below 6.

3.4 Press Freedom

The state of press freedom in Bangladesh is derived from data in the “*World Press Freedom Index*” by Reporters without Borders. The index ranges from 0 to 110, where 0 signifies the top rating, i.e. no press freedom obstacles, and 110 the worst rating. Countries with scores above 20.00 are characterized as having a “*problematic press freedom situation*.” Between 2002 and 2012 Bangladesh has scored above 40, at times above 60.

3.5 Civil Liberties

We have utilized three sets of longitudinal data from the Freedom House’s *Freedom in the World* index to arrive at our gradation: a. 20 years of ratings of Civil Liberties (1991–2011, average is 3.9 on a scale of 0 to 7) (Table 4); b. 10 years of aggregate scores (2002–2012, average 31.8 on 0–60 scale) (Table 5); c. subcategories’ data of civil rights for seven years (between 2006 and 2012) of which one subcategory passed the 60 percent threshold (9 out of 15 points) (Table 6). The record here is mixed. Despite some years with serious deterioration, other years show a positive trend.

3.6 Rule of Law

One of the key features of the hybrid regime is the poor rule of law as a regime selectively uses laws for its own benefit and persecutes potential opponents. It also undermines the independence of the judiciary. Countries with hybrid regime experiences extra judicial activities including extra judicial killings. Operations of vigilante groups are commonly sanctioned by the government. We have utilized three sources to determine the rule of law situation: a. scores in the subcategory of ‘rule of law’ in the *Freedom in the World* (2006–2012, average 6.2 on a 0–15 point scale, the higher the points, the better is the rule-of-law situation) (Table 6); b. terror scale of Amnesty International (1991–2010, average 3.4 on a 1–7 scale where 7 is the worst) (Table 7); c. terror scale of United States Department of State (1991–2010, average 3.7 on a 1–7 scale where 7 is the worst) (Table 7). Drawing on these three

Table 3: Press Freedom

Year	2011–2012	2010	2009	2008	2007	2006	2005	2004	2003	2002
Rank	129	126	121	136	134	137	151	151	143	118
Score	57.00	42.50	37.33	42.70	53.17	48.00	61.25	62.50	46.50	43.75

Source: Reporters Without Borders, *World Press Freedom Index*, Various Years, <http://en.rsf.org/press-freedom-index-2011-2012,1043.html>

Table 4: Freedom House Scores 1991–2010

Year	Political Rights	Civil Liberties
1991	2	3
1992	2	3
1993	2	4
1994	2	4
1995	3	4
1996	2	4
1997	2	4
1998	2	4
1999	3	4
2000	3	4
2001	3	4
2002	4	4
2003	4	4
2004	4	4
2005	4	4
2006	4	4
2007	5	4
2008	4	4
2009	3	4
2010	3	4

Source: Freedom House, *Freedom in the World*, Various Years, <http://en.rsf.org/press-freedom-index-2011-2012,1043.html>

Table 5: Freedom House Aggregate Score, 2003–2012

	PR (0–40)	CL (0–60)
2003	21	33
2004	21	33
2005	22	32
2006	22	31
2007	22	31
2008	12	28
2009	22	30
2010	26	33
2011	26	34
2012	25	33

Source: Freedom House, *Freedom in the World*, “Freedom in the World: Aggregate and Subcategory Scores,” various years, <http://www.freedomhouse.org/report/freedom-world-aggregate-and-subcategory-scores>

Table 6: Subcategories of Political and Civil Rights

Year	Political Rights			Civil Liberties			
	Electoral Process	Political Pluralism	Functioning of Government	Freedom of Expressions	Associational and Organizational Rights	Rule of Law	Personal Autonomy and Individual Rights
2006	8	10	4	8	8	6	9
2007	8	10	4	8	8	6	9
2008	3	5	4	7	6	6	9
2009	9	9	4	8	8	5	9
2010	9	11	6	9	8	7	9
2011	9	11	6	9	9	7	9
2012	9	11	5	9	8	7	9

Note: The ratings process is based on a checklist of 10 political rights questions and 15 civil liberties questions. Political Pluralism and Participation (4), and Functioning of Government (3). The civil liberties questions are grouped into four subcategories: Freedom of Expression and Belief (4 questions), Associational and Organizational Rights (3), Rule of Law (4), and Personal Autonomy and Individual Rights (4). Scores are awarded foreach of these questions on a scale of 0 to 4, where a score of 0 represents the smallest degree and 4 the greatest degree of rights or liberties present. The highest score that can be awarded to the political rights checklist is 40 (or a total score of 4 for each of the 10 questions). The highest score that can be awarded to the civil liberties checklist is 60 (or a total score of 4 for each of the 15 questions). (*Source:* Freedom House, *Freedom in the World*, "Freedom in the World: Aggregate and Subcategory Scores," various years, <http://www.freedomhouse.org/report/freedom-world-aggregate-and-subcategory-scores>)

Table 7: Rule Law/Terror Scales

Year	Terror Scale AI	Terror Scale USSD
1991	3	4
1992	4	4
1993	3	3
1994	3	3
1995	3	3
1996	3	4
1997	3	4
1998	2	4
1999	3	3
2000	3	3
2001	4	3
2002	3	4
2003	3	4
2004	4	4
2005	4	4
2006	4	4
2007	4	4
2008	4	4
2009	4	4
2010	4	4

Source: Political Terror Scale (PTS), www.politicalterror.org/countries.php?region=Eurasia&country=Bangladesh

sources we have concluded that the rule-of-law situation in Bangladesh is a matter of serious concern.

3.7 The Comprehensive Picture

These disaggregated data on six key features of governance and state of democracy are now compiled into a table to present a comprehensive picture (Table 8).

In the last column in Table 8, we have summarized the number of affirmative “*hybrid regime*” indicators. The highest possible score is 6, and Bangladesh scored 5.

The indices have clearly revealed that democracy in Bangladesh can be described as hybrid regime. Bangladesh is not unique in this regard; an array of countries falls into this category. As we have discussed earlier the category is broad enough to include a wide range of regimes which do not fit into either the full democracy or outright authoritarianism categories. Hence, it is incumbent on us to explore further and discuss other characteristics that help us to bring some specificity to the nature and quality of democracy. In this regard, the concept of Tutelary Control (TC) provides helpful clues.

4 Tutelary Powers

Tutelary powers undermine the authority of democratic politics and they (elected representatives) are subordinate to the whims and wishes of their unaccountable masters (Schedler 2002). According to (Puhle 2005), “*This type of defective democracy is characterized by the existence of reserved domains of undemocratic forces functioning as extra-democratic power centers and veto players, like the military or some traditional oligarchic factions and groups. Apart from the classical case of Atatürk’s Turkey, this type has been more frequent in Latin America (down to its somewhat reduced form in contemporary Chile) and in Southeast Asia, than in other parts of the world.*”

In new democracies this often means that power lies with the military (for example, Guatemala, El Salvador) or clerical leadership (for example, Iran). The concept has been used more frequently and its analytical value has been tested more vigorously in the context of Latin America. For a critique of the concept and its usage in the Latin American context, see Rabkin (1992–1993). Tutelary power as practiced in Bangladesh takes the form of party leaders who have been elevated to leadership positions due to their family lineages and established *dynastic rule* within parties. Power has been concentrated in the hands of one or two leaders (for example, Sheikh Hasina, Khaleda Zia, General Ershad). For a detailed discussion on dynastic rule in Bangladeshi politics, see Ali (2010). The entire political class, irrespective of their party affiliations, has adopted two strategies: majoritarianism and coercion. The former is achieved through elections. In this

regard the Bangladeshi political class has internalized the archetypal characteristics of what O’Donnell has called “*delegative democracy*” (O’Donnell 1994).

5 Delegative Democracy

In delegative democracy what is needed is to create a majority and establish a claim that the elected leader embodies the nation. The system is highly individualistic, yet it emphasizes the electoral process, because election is the way to create a majority. “*This majority must be created to support the myth of legitimate delegation.*” And given the significance “*elections are very emotional and highstakes events.*” Ironically, the role of the election and electorates are limited: “*candidates compete for a chance to rule virtually free of all constraints save those imposed by naked, noninstitutionalized power relations. After the election, voters/delegators are expected to become a passive but cheering audience.*” Typically the Presidential system provides the opportunity, although it is easy to discern how that fits into the parliamentary system in Bangladesh where the Prime Minister has a Presidential aura: “*whoever wins election to the presidency is thereby entitled to govern as he or she sees fit, constrained only by the hard facts of existing power relations and by a constitutionally limited term of office. The president is taken to be the embodiment of the nation and the main custodian and definer of its interests*” (O’Donnell 1994).

Gramsci further opined that consent and coercion co-exist in all societies. The coercive elements inherent in a hegemonic system are laid bare if, and when, the ability of the ruling classes to organize consent weakens. Under normal circumstances, the elements of coercion are kept latent, concealed. The ruling classes seek and, of course, prefer the active and voluntary consent of the subordinate masses. But when the masses ‘do not “consent” actively or passively’ or the consent is not sufficient to reproduce capitalist relations, the apparatus of state coercive power “legally enforces discipline on those ... who do not consent” (Gramsci 1971). That is why the ruling classes, in any society, attempt to impose a general direction on social life through their ideology and ensure social conformity to that ideology. If this fails, coercion becomes the principal tool to rule the masses. The enactment of laws inimical to human rights, either creating or continuing paramilitary force such as the Rapid Action Battalion (RAB), and providing impunity to coercive forces by all elected civilian regimes in the past two decades reveal that the political class of Bangladesh has opted for coercion to make up for the absence of hegemony.

In the event of lack of hegemony and consequent dependence on coercion, the political class not only tramples on political rights and civil rights at will, but also

Table 8: Indicators of Hybrid Regime

Competitive Elections	Significant levels of corruption	Lack of democratic quality	Problematic press freedom situation	Poor civil liberties situation	Lack of rule of law	Hybrid regime indicator
x	x	x	x		x	5

Source: Author's compilation.

resists any efforts to hold it accountable. In common understanding accountability is of two kinds: vertical and horizontal. There is an inherent contradiction in underscoring the importance of elections on the one hand while opposing the notion of accountability on the other. For the political class accountability has only one meaning — vertical accountability (making elected officials answerable to the ballot box); whereas, “*in institutionalized democracies, ... accountability runs also horizontally, across a network of relatively autonomous powers (i.e., other institutions) that can call into question, and eventually punish, improper ways of discharging the responsibilities of a given official*” (O'Donnell 1994). Smulovitz and Peruzzotti (2000) have suggested a third kind of accountability: societal accountability: *Societal accountability is a non-electoral, yet vertical mechanism of control that rests on the actions of a multiple array of citizens' associations and movements and on the media, actions that aim at exposing governmental wrongdoing, bringing new issues onto the public agenda, or activating the operation of horizontal agencies. It employs both institutional and noninstitutional tools* (Smulovitz and Peruzzotti 2000).

In Bangladesh, not only does the political class oppose but actively frustrates any efforts to build institutions that will be the source of horizontal accountability. The long standing struggle to create the National Human Rights Council (NHRC) in Bangladesh is illustrative in this regard. While the NHRC has finally come into being in the past year, it has remained fragile and ineffective due to lack of resources and the government's unwillingness to provide it any power. Similar attitudes towards the Anti-Corruption Commission (ACC) corroborate the point. These institutions are considered by the political class, irrespective of their party affiliations, as unnecessary, burdensome and detrimental to the political mission. Vilification of social movements by party leaders and ministers including the PM is the most glaring example that the ruling regime is opposed to any kinds of societal accountability. If any evidence is necessary, one can recollect the reactions of the ruling party and the PM regarding the social movement against the road accidents in August 2011. In similar vein, the PM has incessantly criticized the media for finding fault with her administration.

The notion of rule has remained elusive to Bangladesh

for decades. The narrowest definition of the *rule of law* involves ensuring security of the citizens, guaranteeing equality before the law and the separation between the executive and judiciary. Any observer of Bangladesh knows that no progress has been made in these three aspects since 1991. The extrajudicial killings, at the hands of the law enforcing agencies and through public lynching, have been on the rise. Between January and May of 2012, at least 45 people were killed by the law enforcing agencies according to a Human Rights Group. The group also informs of an ominous development — enforced disappearance. At least 13 people have reportedly disappeared during this period (Odhikar 2012). The impunity accorded to the perpetrators, throughout the history of the nation, has made the situation worse.

6 Conclusion

There is a clear consensus among political scientists and analysts that no specific subset of hybrid regime is in a transitional stage; that means there is no clear path to full democracy or authoritarianism. There is a dearth of data to determine the durability of the hybrid regime, including delegative democracies, as the phenomenon is new. Thus charting the trajectory of the delegative democracy is a challenging task, to say the least. However, three arenas are considered crucial for the maintenance of hybrid regimes: the electoral arena, the executive and legislative arena, and the judicial arena. In a study of three hybrid regimes — Russia, Venezuela, and Tanzania, Joakim Ekman argued that in addition to these three “*the role of the public stands out as a distinct dimension.*” In hybrid regimes, since elections serve as a source of legitimacy and are often bitterly contested, they are open to a certain level of manipulation and abuse of state power. The level of manipulation depends on the strength of the opposition political parties and civil society. The records of hybrid regimes show that electoral manipulation has been both blatant and stealthy; constitutional measures have often been used by the regime. As for executive–legislative relations, weak and ineffective parliaments serve the purpose of the regime. However, they can still function as potential platforms for the opposition.

Subordination of the third arena is almost a prerequisite for the maintenance of the hybrid regime. Levitsky and Way argue that this is often done by means of bribery and extortion, and, if possible, by appointing and dismissing judges and officials. According to Brown and Wise (2004), institutions such as the supreme court or constitutional courts tend to function not only as arbiters of constitutionality and legal principles but also as advocates of the current regime. Ekman (2009), in all three hybrid regimes he studied, found both structural and political cultural elements as enabling forces. Among the structural factors “a weak or ineffective political opposition,” and “lack of interplay between ordinary citizens and opposition parties” were present in all three cases. As for political culture, the lack of civic culture and widespread disillusionment with politics continue to play roles, in various degrees.

While the enabling factors for the maintenance of hybrid regime are by no means the perfect predictors for the trajectory of democracy in Bangladesh, they do indicate what to avoid if Bangladeshi citizens want to move in a different direction.

Endnotes

1. Originally written by Lauth (2002) and translated and quoted by Bogaards (2009).
2. The central argument of the book (Fukuyama 1991) was made in an essay (Fukuyama 1989).

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Money Growth, Relative Food Prices and Inflation in Bangladesh: An Empirical Investigation with Monthly Data, 1972–2011

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Abstract

This paper uses trend-and-seasonally-adjusted monthly data over the period 1972–2011 to investigate the presence and quantum of any long-run relation between money supply (narrow or broad); consumer prices and food prices; the nominal exchange rate; and industrial output in Bangladesh. It tests the validity of the money-neutrality prediction that nominal prices, namely food prices and consumer prices, increase proportionately to an increase in the money supply. The empirical results are consistent with this prediction, implying that the relative prices of food are long-run-invariant to an increase in money supply. Short-run food prices, however, respond to monetary expansion more rapidly than the general price level as proxied by the consumer price index (CPI). To investigate the sources of inflation, this paper estimates an error-correction model of inflation within the Autoregressive Distributed Lag (ARDL) cointegration approach. The empirical results suggest that changes in the relative prices of food and currency devaluation impact positively on the rate of inflation. The results obtained by the ARDL modeling approach support those obtained by both the Granger (predictive) causality tests and impulse-response analytical techniques.

1 Introduction

There is ongoing debate on the impact of monetary shocks on relative food prices¹ and inflation in developing countries. The classical monetary theory suggests that there exists a long-run one-to-one relation between money supply and nominal prices, implying that a monetary expansion does not have a long-term impact on the relative prices of goods and services (Grennes and Lapp 1986, Pauls 1987). However, in developing countries, monetary expansion raises food prices more rapidly than the general price level. Consequently, a monetary expansion may have a positive impact on the relative price of food (Ardeni and Freebairn 2002). This can create confusion between the movements of relative food prices and the rate of inflation.

One research question is whether the movements of the relative price of food have any independent impact on the rate of inflation. According to classical monetary theory, the relative price of food responds to changes in demand and supply of goods and is therefore invariant to the rate of inflation at a steady-state. This outcome is achieved when the nominal prices are flexible and adjust fully to monetary expansion within a short time. The relative prices of food and other items should therefore not be

considered an independent source of long-term inflation. However, when the nominal prices adjust only partially and at different pace, changes in the relative price of food for example may have a positive impact on the rate of inflation and through it, on other variables.²

Until the mid-1980s the financial system in Bangladesh was repressed and its monetary policy was conducted to achieve multiple objectives. Since then the role of monetary policy has changed towards achieving price stability while maintaining sustainable steady economic growth. The policymakers in Bangladesh, however, remain concerned about the volatility of food prices which remain volatile due to both demand and supply shocks, in addition to the seasonal factors. Monetary policy reactions to supply shocks, political disturbances and other uncertainties raise food-price volatility through their impacts on the interest rates, exchange rates, and government's commercial policies and regulations over trade and capital flows.³ Monetary responses to food price shocks generally undermine monetary policy effectiveness in maintaining price stability.⁴

The main aim of this paper is to investigate the relations between money, output, prices, and exchange rate in Bangladesh with monthly data over the period 1972–

2011.⁵ The paper is organized as follows. Section 2 discusses the relations between money and prices and explains the conditions which may lead to overshooting of food prices owing to any monetary expansion. Section 3 reports the unit-root test results for the time-series variables employed in this study. Section 4 investigates the relations between money supply (narrow or broad), consumer (or food) prices, industrial output and the nominal effective exchange rate of the taka⁶ by applying the Autoregressive Distributed Lag (ARDL) cointegration approach. Section 5 estimates a four-variable vector error-correction model for money supply, consumer (or food) prices, nominal exchange rate and industrial output, and conducts both the Granger (predictive) causality tests and the impulse response analysis. Section 6 draws policy implications and makes concluding remarks.

2 Monetary Shocks and Relative Food Prices

Economists generally agree that inflation in the long run is a monetary phenomenon in the sense that an increase in the money supply causes an equi-proportionate increase in the price level such that it does not affect real variables in the economy. This is the essence of the *Quantity Theory of Money*, which postulates monetary neutrality in the long run (Friedman 1992). A corollary of this proposition is that the relative prices are invariant to any monetary expansion; that is, the nominal prices adjust fully to an increase in the money supply. Money is considered super-neutral if a rise in the growth rate of the money supply affects the relative prices or returns on alternative assets (Ardeni and Freebairn 2002). Neutrality or super-neutrality of money, however, does not hold in the short run. Economists generally believe that money does have some impact on output in the short run (Haliassos and Tobin 1990, Orphanides and Solow 1990).⁷

The idea that the relative prices of food for example are invariant to any monetary expansion can be expressed in the form of demand and supply functions of food as homogenous of degree zero in the price level. The short-run aggregate supply curve of food is positively sloped while the long-run aggregate supply curve of food is vertical. This indicates that monetary expansion raises the relative price of food in the short run, but in the long run the supply of food depends on sector-specific factors of production, namely labor, capital and technology (Ardeni and Freebairn 2002).

Figure 1 illustrates this phenomenon within the aggregate demand and aggregate supply model for food. In this model, monetary expansion shifts rightward the aggregate demand curve for food (D_0^f to D_1^f). It raises both

food prices ($\frac{P^f}{P} = p^f$) and food production (q^f) given that the short-run aggregate supply curve of food is upwardly sloped. Such an increase in food prices may magnify when monetary expansion induces a leftward shift of the aggregate supply schedule of food (S_0^f to S_1^f). It may take place if the farmers use food items (say, rice and wheat) and money as alternative stores of value. They may adjust asset portfolios in response to monetary shocks, which can alter the relative returns on real and financial assets. For example, monetary loosening (tightening) may decrease (increase) the required rate of return on holding food items relative to the return on money and other financial assets.⁸ This may lower food supply and destabilise food prices.⁹ This shows that a monetary expansion can affect the relative food prices in the same way as a negative supply shock, which raises the production costs and shifts leftward the aggregate supply schedule for food. Thus, in short, a rapid expansion (contraction) of money supply can have a short-run supply side effect on the relative price of food, which may amplify any demand side inflationary (deflationary) pressure (Shapiro 1992). In the long-run, the vertical supply curve of food (S_L) is expected to shift to the right with an increase in the factors of production that determine the food productive capacity in the agricultural sector.

Monetary expansion can cause overshooting of food prices due to varied flexibility of sectoral prices. Food prices in general are more flexible than non-food prices (Han, Jansen and Penson 1990). Both the demand and supply schedules of food are price inelastic and any shift in the demand schedule or supply schedule or both can cause sharp fluctuations of food prices (Cairnes 1873). Unlike the prices of homogenous food items which are highly flexible (Bordo 1980), the prices of non-food products are less flexible. This is because the supply schedule for non-food products could be elastic in economies where there are no major restrictions over trade flows. If non-food products are traded in oligopolistic markets, the prices of these products may also show high degree of rigidities. Consequently, the food prices may respond to monetary shocks more rapidly than non-food prices, leading to overshooting of food prices if high inflationary expectations are built into the economy.¹⁰

How a central bank conducts monetary policy, therefore, has important implications on the movements of relative food prices. An expansionary monetary policy may lead to an overshooting of food prices from their equilibrium levels, while a contractionary monetary policy may shift the relative prices against agriculture. This means that agriculture may gain from a loose monetary policy, while it may lose during a tight monetary policy.¹¹

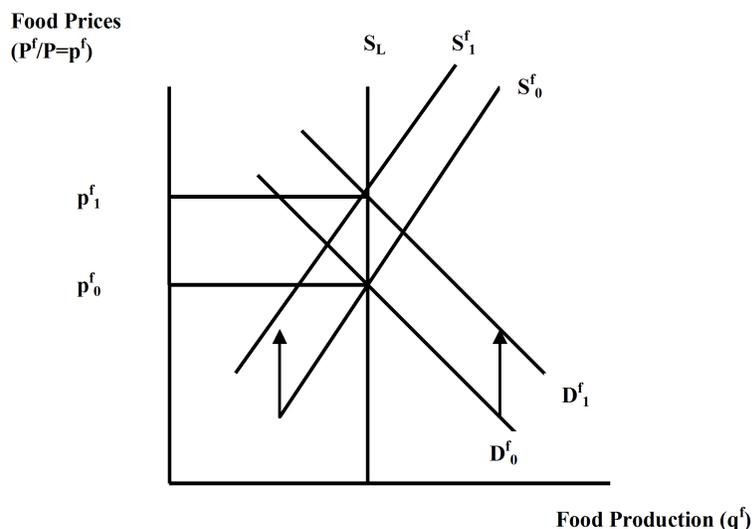


Figure 1: Food prices and production.

3 Data

The monthly data for the money stock (narrow NM or broad BM), the food price index (FPI), the consumer price index (CPI), the nominal effective exchange rate of the taka (NEER) and the industrial production index (IPI) have been compiled from several publications such as the *Economic Indicators of Bangladesh* of BBS (Various Issuesa) and BBS (Various Issuesb), the *Bangladesh Bank Bulletin* of Bangladesh Bank (Various Issuesa), the *Economic Trends* of Bangladesh Bank (Various Issuesb), and *International Financial Statistics* of the IMF (Various Issues). The relative price of food (RPF) is measured as the ratio of the food price index to the consumer price index, expressed as per cent.

The range of the data series for all these variables is 1972–2011. The data are trend-adjusted and seasonally-adjusted, as obtained by running a regression for each series on a constant, a time trend and eleven monthly seasonal dummies. The residuals represent the trend- and seasonally-adjusted data. A few small gaps in the series for industrial output and the nominal effective exchange rate have been filled by interpolation in the case of industrial output and using the exchange rate of the taka against the US dollar in the case of the nominal effective exchange rate. The trend- and seasonally-adjusted data series¹² have been transformed into natural logarithms for statistical analysis and estimation.

Table 1 reports the unit-root test results obtained by application of the Augmented Dickey-Fuller (ADF) test and the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) test. The first test treats the series under consideration

non-stationary as a null hypothesis, while the second test treats the series under consideration stationary as a null hypothesis. The explanatory power of a given study is at its most powerful if the results of these tests are mutually confirmatory (Maddala 2001). For testing purposes in this study, all the data series were transformed into natural logarithms and a constant included in the specification in both the log level and first-order log-difference forms. All the tests have been conducted for the full sample 1972–2011. The lag-adjusted sample period is, however, smaller depending on the number of optimal lag terms in the regression. As the tests are sensitive to the lag length, the Schwartz Bayesian Criterion (SBC) has been used to select the optimal lag length under the restriction that the maximum lag length is 17. The test results are not mutually confirmatory for all the series. LCPISA, LFPISA, LNMSA, LBMSA, LIPISA and LNEERSA appear to have a unit root. The relative food price and the first-difference in all the series are stationary.

4 Long-Run Relation Between Money, Output and Prices

This section adopts the cointegration approach to test for the presence of a long-run cointegral relation connecting money, output and prices. In general, there is a choice with respect to the procedure for estimation of a cointegral relationship. The two most commonly-used approaches are the Engle-Granger two-step residual-based procedure (Engle and Granger 1987) and Johansen's system-based reduced-rank regression approach (Johansen 1988, Johansen and Juselius 1990). These approaches involve

Table 1: The ADF and KPSS Test Statistics

Variables	ADF test statistic (with constant) Figures in parentheses are one-sided <i>p</i> -values	KPSS Test Statistic (with constant)
LCPISA	-4.24 (0.00)	2.61
Δ LCPISA	-4.71 (0.00)	0.82
LFPISA	-4.13 (0.00)	2.62
Δ LFPISA	-23.98 (0.00)	0.54
LRPFSA	-3.28 (0.00)	0.88
Δ LRPFSA	-24.43 (0.00)	0.07
LNMSA	-0.97 (0.33)	2.73
Δ LNMSA	-30.17 (0.00)	0.27
LBMSA	-0.90 (0.37)	2.72
Δ LBMSA	-7.03 (0.00)	0.53
LIPISA	0.60 (0.99)	2.62
Δ LIPISA	-15.79 (0.00)	0.20
LNEERSA	-2.28 (0.20)	2.41
Δ LNEERSA	-20.08 (0.00)	0.17

Notes:

1. Definitions of variables:

- LCPISA = log of trend-and seasonally-adjusted consumer price index
- LFPISA = log of trend-and seasonally-adjusted food price index
- LRPFSA = log of trend-and seasonally-adjusted relative price of food, defined as the ratio of the food price index to the consumer price index, expressed in percent
- LNMSA = log of trend-and seasonally-adjusted nominal narrow money stock (currency plus demand deposits) (millions of taka)
- LBMSA = log of trend-and seasonally-adjusted nominal broad money supply (currency plus demand and time deposits) (millions of taka)
- LIPISA = log of trend-and seasonally-adjusted industrial production index
- LNEERSA = log of trend-and seasonally-adjusted nominal effective exchange rate of the taka (a rise in the value of this index represents appreciation)

2. The optimal lag length selected for the ADF test statistic is based on the SBC with maximum lag length 17.

3. The critical value of the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) with constant is 0.463.

cases where the underlying variables are integrated of order one, $I(1)$. Since most applied researchers face the problem of not knowing with certainty whether or not the variables in the relationship under investigation have a unit root, there is a growing literature that uses the Autoregressive-Distributed-Lag (ARDL) bounds-testing approach.¹³ This paper deploys the ARDL approach to test for a long-run cointegration relation connecting money, output, exchange rates and prices. A brief description of the approach is reported next.

4.1 The Bounds-Testing Approach to Identifying Cointegration

Following (Pesaran and Pesaran 1997), an error-correction version of the ARDL model in three generic

variables say x , y , and z is given by

$$\begin{aligned} \Delta y_t = & \alpha_0 + \alpha_1 \text{Trend} + \sum \beta_i \Delta y_{t-i} \\ & + \sum \gamma_i \Delta x_{t-i} + \sum \phi_i \Delta z_{t-i} \\ & + \delta_1 y_{t-1} + \delta_2 x_{t-1} + \delta_3 z_{t-1} \\ & \text{where } i = 1, 2, 3, \dots, p \end{aligned}$$

where the coefficients β_i , γ_i and ϕ_i represent the short-run dynamics of the underlying variables in the ARDL model and the coefficients δ_s represent the long-run relationship. The underlying null hypothesis of no long-run relationship among y , x and z is an F -test for the restriction that $H_0 : \delta_1 = \delta_2 = \delta_3 = 0$ against the alternative that $H_1 : \delta_1 \neq 0$ and $\delta_2 \neq 0$ and $\delta_3 \neq 0$. The specified model is, however, estimated first in a restricted form where the level-form lagged variables are excluded and

then the significance of these variables is tested through a variable-addition test.

In the present study, the error-correction form of the ARDL model for the variables LCPISA (or LFPISA), LNMSA (or LBMSA), LIPISA and LNEERSA is specified and estimated sequentially with lag terms up to a maximum of 12 with ($i = 1, 2, 3, 4, \dots, 12$):

$$\begin{aligned} \Delta LPSA_t = & \alpha_0 + \sum \beta_i \Delta LPSA_{t-i} \\ & + \sum \gamma_i \Delta LIPISA_{t-i} \\ & + \sum \phi_i \Delta LMSA_{t-i} \\ & + \sum \mu_i \Delta LNEERSA_{t-i} \\ & + \delta_1 LPSA_{t-1} \\ & + \delta_2 \Delta LMSA_{t-1} \\ & + \delta_3 \Delta LIPISA_{t-1} \\ & + \delta_4 \Delta LNEERSA_{t-1} \\ & + u_t \end{aligned}$$

where LPSA is the generic price variable (LCPISA or LFPISA), M is the generic money stock (LNMSA or LBMSA) and all other variables are as defined earlier. This specification is based on the maintained hypothesis that the time-series properties in the relationship among money, output and prices can be approximated by a log-linear VAR $|p|$ model, augmented with deterministic intercepts and (probably) trends (Trend).¹⁴

Testing for the Hypothesis that $\delta_1 = \delta_2 = \delta_3 = \delta_4 = 0$.

The model is estimated first in a restricted form by excluding the level-form lagged variables and then is tested for the significance of these variables through a variable addition. For instance, the estimated F -statistic for the restriction that $\delta_1 = \delta_2 = \delta_3 = \delta_4 = 0$ in the specification with LCPISA as dependent variable is denoted by $F(\text{LCPISA}|\text{LMSA}, \text{LIPISA}, \text{LNEERSA})$. This process is then repeated for each of the specifications with respect to money, output and the exchange rate as successive dependent variables. For instance, the estimated F -statistic for the restriction that $\delta_1 = \delta_2 = \delta_3 = \delta_4 = 0$ in the specification for LNMSA is denoted by $F(\text{LNMSA}|\text{LPSA}, \text{LIPISA}, \text{LNEERSA})$. The estimated F -statistics for all these specifications are then compared with the critical values to determine the existence of any long-run relationship among the variables concerned. In addition, the F -statistics $F(\text{LNMSA}|\text{LPSA}, \text{LIPISA}, \text{LNEERSA})$, $F(\text{LIPISA}|\text{LPSA}, \text{LMSA}, \text{LNEERSA})$ and $F(\text{LNEERSA}|\text{LPSA}, \text{LMSA}, \text{LIPISA})$ are used to infer whether LNMSA or LIPISA or LNEERSA can be considered a long-run forcing variable in determining other variables.

Table 2 reports the F -statistics for addition of lagged level variables in the error-correction specification with

up to 12 lag terms¹⁵ and the critical values at the 90 per cent and 95 per cent levels. The asymptotic distribution of the F -statistic is non-standard under the null hypothesis of no level relationship irrespective of whether the regressors are $I(0)$ or $I(1)$. Two sets of critical values are relevant for the test: one when all regressors in the relationship are purely $I(0)$ and the other if they are all purely $I(1)$. These two sets of critical values provide a band covering all the possible classifications of regressors into purely $I(0)$, purely $I(1)$ or mutually cointegrated. If the test statistic exceeds the upper critical value, the null hypothesis of no long-run relationship is rejected regardless of whether the underlying orders of integration of regressors are zero or one. Similarly, if the test statistic falls below the lower critical value, the null hypothesis is not rejected. If the test statistic falls between two critical bounds, the result is inconclusive and information on the time series properties of the regressors is required to make judgement about the nature of the relationship. When the order of integration of the variables is known and all the variables are $I(1)$, the decision is made based on the upper bound. Similarly, if all the variables are $I(0)$, the decision is made based on the lower bound.

In the present study, the model is estimated with an intercept, but no trend. The critical value band for $k = 3$ is (2.711 to 3.800) and (3.219 to 4.378) at the 90 percent and 95 percent, respectively. Since $F(\text{LCPISA}|\text{LNMSA}$ or $\text{LBMSA}, \text{LIPISA}, \text{LNEERSA})$ exceeds the upper limit of the critical band irrespective of the order of lag, the null hypothesis of no long-run relationship between LCPISA, LNMSA or LBMSA, LIPISA and LNEERSA can be rejected. Similarly, in the specification of LFPISA, the statistic $F(\text{LFPISA}|\text{LNMSA}$ or $\text{LBMSA}, \text{LIPISA}, \text{LNEERSA})$ exceeds the upper bound of the band and therefore the null hypothesis of no long-run relationship between LFPISA, LNMSA or LBMSA, LIPISA and LNEERSA can be rejected.

In the specification of LNMSA, the F -statistic $F(\text{LNMSA}|\text{LCPISA}$ or $\text{LFPISA}, \text{LIPISA}, \text{LNEERSA})$ is below the upper limit of the band, suggesting that LNMSA can be considered a "long-run" forcing variable for the explanation of LCPISA or LFPISA. The F -statistic $F(\text{LBMSA}|\text{LCPISA}$ or $\text{LFPISA}, \text{LIPISA}, \text{LNEERSA})$ is, however, above the upper limit of the band. The F -statistics for all other variables in the model, in particular, LIPISA and LNEERSA, suggest that they cannot be considered long-run forcing variables in the system. The overall results suggest that money, output and prices maintain a long-run relation and that they have both short-term and long-term interactions.

Table 2: Testing for Long-Run Relation Among Money, Output, Prices, and Exchange Rates.

Order of lag		<i>F</i> -statistic (4, > 400)			
Order	<i>F</i> (LCPISA or LFPISA LNMSA, LIPISA, LNEERSA)		<i>F</i> (LCPISA or LFPISA LBMSA, LIPISA, LNEERSA)		
of Lag	LCPISA	LFPISA	LCPISA	LFPISA	
2	8.65	8.79	10.37	9.90	
4	6.42	8.18	8.34	10.43	
8	5.56	5.87	4.84	5.46	
12	3.19	4.63	3.88	5.61	
Order	<i>F</i> (LNMSA or LBMSA LCPISA, LIPISA, LNEERSA)		<i>F</i> (LIPISA LCPISA, LNMSA or LBMSA, LNEERSA)		
of Lag	LNMSA	LBMSA	LCPISA	LBMSA	
2	3.57	6.53	6.92	9.27	
4	3.52	5.87	5.14	7.21	
8	2.67	2.54	4.01	4.54	
12	1.45	3.29	5.96	6.00	
Order	<i>F</i> (LNMSA or LBMSA LFPISA, LIPISA, LNEERSA)		<i>F</i> (LIPISA LFPISA, LNMSA or LBMSA, LNEERSA)		
of Lag	LNMSA	LBMSA	LNMSA	LBMSA	
2	3.29	5.39	5.91	9.54	
4	3.71	4.81	4.30	7.43	
8	2.97	2.91	3.58	4.08	
12	1.33	3.20	5.55	5.67	
Order	<i>F</i> (LNEERSA LCPISA, LNMSA or LBMSA, LIPISA)		<i>F</i> (LNEERSA LFPISA, LNMSA or LBMSA, LIPISA)		
of Lag	LNMSA	LBMSA	LNMSA	LBMSA	
2	7.24	6.45	6.99	6.50	
4	5.75	4.95	7.12	6.92	
8	6.08	4.49	6.65	4.90	
12	6.17	4.42	6.33	5.29	

Note: The critical value bounds of the *F*-statistic (with constant, no trend and $k = 3$) are (2.711–3.800) and (3.219–4.378) at the 90 percent and 95 percent respectively.

4.2 Estimated Coefficients in the Relation Among Money, Output, and Prices

The second stage of the ARDL modeling involves estimating the coefficients of the long-run relations and making inferences about their values. The estimation procedure is untidy because a number of choices are made with respect to the inclusion of intercept, trend and lag length. This makes the procedure experimental. In general, in estimating the long-run coefficients, the ARDL technique estimates $(p + 1)^k$ number of regressions to obtain the optimal lag length for each variable, where p is the maximum number of lags and k is the number of variables in the equation. The model can be selected using model selection criteria such as the Schwartz Bayesian Criterion (SBC); the Akaike Information Criterion (AIC) or others. The SBC selects a parsimonious model with the smallest possible lag length. This study uses the SBC criterion to select the optimal order of lag.

Table 3 reports the estimated long-run coefficients on the money stock, industrial output and the nominal effective exchange rate of the taka with consumer prices (or

food prices) as dependent variable. The price equations are estimated with the order of log 2 in the variables.¹⁶ Because of the trend-adjusted data, the models are estimated without a trend. In both the consumer price and the food price equations, the coefficient on the money stock (narrow or broad) bears a positive sign and is statistically highly significant. The proposition of a unit value coefficient on the money stock is not rejected by the Wald test. This suggests that the price level rises proportionately to an increase in the money supply.¹⁷ This result is consistent with the long-run money-neutrality proposition. The error-correction term (ecm) in the model bears a negative sign and is statistically highly significant. This confirms that money, output and prices are collaterally related in Bangladesh. Two other findings are noteworthy. The coefficient of the money supply in the specification for food prices is higher than that in the specification for consumer prices. The absolute value of the error-correction coefficient is also larger in the specification for food prices than the corresponding coefficient in the specification for consumer prices, implying that food prices adjust more rapidly than consumer prices to the long-term equilibrium

Table 3: The Long-Run Coefficient on Money: ARDL Model of Prices.

Dependent Variable	ARDL Model	Long-run Coefficient on Money	<i>t</i> -ratio	Wald Statistic H_0 : Coefficient on Money = 1 ($\chi^2_{(1)}$)	Error Correction Model	
					Error Correction Term (-1)	Absolute <i>t</i> -Ratio
With LBMSA						
LCPISA	ARDL(2,0,0,0)	0.82	3.34	0.52	-0.027	4.84
LFPISA	ARDL(1,0,0,0)	0.98	3.44	0.00	-0.047	4.49
With LBMSA						
LCPISA	ARDL(2,0,0,0)	0.87	5.37	0.61	-0.038	5.65
LFPISA	ARDL(1,1,0,0)	1.00	4.35	0.00	-0.054	4.22

if they deviate from equilibrium values due to shocks.

In order to examine whether relative food prices have an independent impact on inflation, the model is estimated using LRPFSA as an additional regressor. Although LRPFSA does not have a unit root, the ARDL modeling approach allows inclusion of this variable in a long-run relationship. Having estimated the error-correction model with relative food prices as an additional variable, a Wald test is conducted to examine the impact of Δ LRFPISA on the rate of inflation (Δ LCPISA). The test results (Table 4) suggest that changes in relative food prices have a significant positive impact on the rate of inflation. The results are more robust in specification with broad money.

5 Vector Error-Correction (VEC) Models

Following the empirical literature on monetary policy,¹⁸ this section estimates a four-variable vector error-correction model with money (narrow or broad), industrial output, food prices or consumer prices, and the nominal effective exchange rate of the taka. The VEC is a VAR model in first-difference form of these variables and an error-correction term. The model incorporates cointegral relations as the variables included have a unit root and are differenced for making them stationary. The VEC modeling approach is deployed to examine the dynamic responses of prices, output and exchange rates to monetary shocks. The model is estimated for the sample 1972–2011. Following the suggestion of Pesaran and Pesaran (1997), an unrestricted VAR model is estimated first to determine the optimal lag length, with an outcome of two periods using the SBC. Then the VEC model is estimated with 1,2 lag terms and a Granger (predictive) causality test is conducted to determine whether the lagged values of one variable help to predict another variable (Granger 1969). Table 5 summarises the Granger (predictive) causality test results.

Following Stock and Watson (2001), the probability values associated with the χ^2 statistics are reported to flag whether or not the lags on the variable in the row labelled, “Regressor” enter the VEC model for the variable labelled, “Dependent Variable.” These results are generated with the SBC-calculated two lagged terms and estimated for the sample period 1972–2011. The results suggest that Δ LNMSA or Δ LBMSA and Δ LIPISA help to predict the growth of food prices (Δ LFPISA) or consumer prices Δ LCPISA. In contrast, Δ LCPISA or Δ LFPISA does not help much to predict the money supply growth rate, Δ LNMSA or Δ LBMSA.

These findings suggest that the predictive causality in the short-run is from money supply to prices rather than from prices to money supply. They do not, however, suggest that money supply is the only variable that affects prices. Other factors, especially output growth, also impact prices.

The speeds of adjustment in the VEC model have a special interpretation. They show the rapidity with which the system returns to its long-run equilibrium after temporary shocks. Given that food prices are more flexible than general prices, the absolute value of the coefficient on the error-correction term in the model for food prices is expected to be larger than that for general prices as represented by the CPI. The empirical results obtained in the VEC model are consistent with this proposition. The coefficient values of the error-correction terms show that the value of the speed of adjustment in the specification for food prices is -0.027 (*t*-ratio:-6.93) or -0.041 (*t*-ratio:-6.63), respectively, with narrow or broad money, is greater in absolute value than the corresponding Figures obtained for consumer prices: -0.010 (*t*-ratio:-6.49) or -0.026 (*t*-ratio:-7.14).

Figures 2 through 5 report the impulse responses of money, output and prices to generalized one-standard-deviation innovations. As expected, an expansion of the money supply has impacts on food prices or consumer

Table 4: Impact of Relative Food Prices on Inflation

Regressor	Δ LCPIA			Δ LCPIA		
	Coefficient	<i>t</i> -Ratio	Probability	Coefficient	<i>t</i> -Ratio	Probability
Δ LCPIA(-1)	0.22	4.87	0.00	0.21	4.80	0.00
Δ LNMSA	0.02	2.63	0.01	—	—	—
Δ LBMSA	—	—	—	0.03	3.86	0.00
Δ LIPISA	-0.02	-3.33	0.00	-0.01	-1.47	0.14
Δ LNEERSA	0.01	2.09	0.04	0.01	1.49	0.14
Δ LRPFSA	0.04	1.63	0.10	0.04	2.09	0.04
ecm(-1)	-0.03	-5.04	0.00	-0.028	-5.04	0.00
The Wald test: Coefficient on						
Ho: Δ LRPFSA = 0	χ^2 (1)=2.67			χ^2 (1)=4.35		
Ho: Δ LNEERSA = 0	χ^2 (1)=4.38			χ^2 (1)=2.22		
Adj- R^2	0.20			0.22		
DW	2.02			2.01		
SER	0.01525			0.01512		

Notes: The error-correction representations in this table are for the ARDL(2,0,0,0) for LCPIA as dependent variable selected based on the SBC. Adj- R^2 is the coefficient of determination adjusted for degrees of freedom; DW is the Durbin-Watson statistic and SER is the standard error of the regression.

Table 5: The Granger (Predictive) Causality Test

Regressor	Dependent Variable in Regression				
	With Narrow Money				
	Δ LNMSA	Δ LCPIA	Δ LFPIA	Δ LIPISA	Δ LNEERSA
Δ LNMSA	—	0.124	—	0.423	0.000
Δ LCPIA	0.283	—	—	0.938	0.005
Δ LIPISA	0.001	0.283	—	—	0.968
Δ LNEERSA	0.003	0.427	—	0.487	—
All	0.000	0.248	—	0.820	0.001
Δ LNMSA	—	—	0.529	0.461	0.000
Δ LFPIA	0.826	—	—	0.963	0.100
Δ LIPISA	0.001	—	0.278	—	0.968
Δ LNEERSA	0.045	—	0.580	0.509	—
All	0.002	—	0.556	0.856	0.000
With Broad Money					
	Δ LBMSA	Δ LCPIA	Δ LFPIA	Δ LIPISA	Δ LNEERSA
Δ LBMSA	—	0.009	—	0.147	0.000
Δ LCPIA	0.272	—	—	0.820	0.209
Δ LIPISA	0.000	0.161	—	—	0.780
Δ LNEERSA	0.006	0.973	—	0.936	—
All	0.000	0.038	—	0.538	0.000
Δ LBMSA	—	—	0.437	0.176	0.000
Δ LFPIA	0.930	—	—	0.992	0.457
Δ LIPISA	0.000	—	0.388	—	0.777
Δ LNEERSA	0.012	—	0.525	0.938	—
All	0.000	—	0.594	0.609	0.000

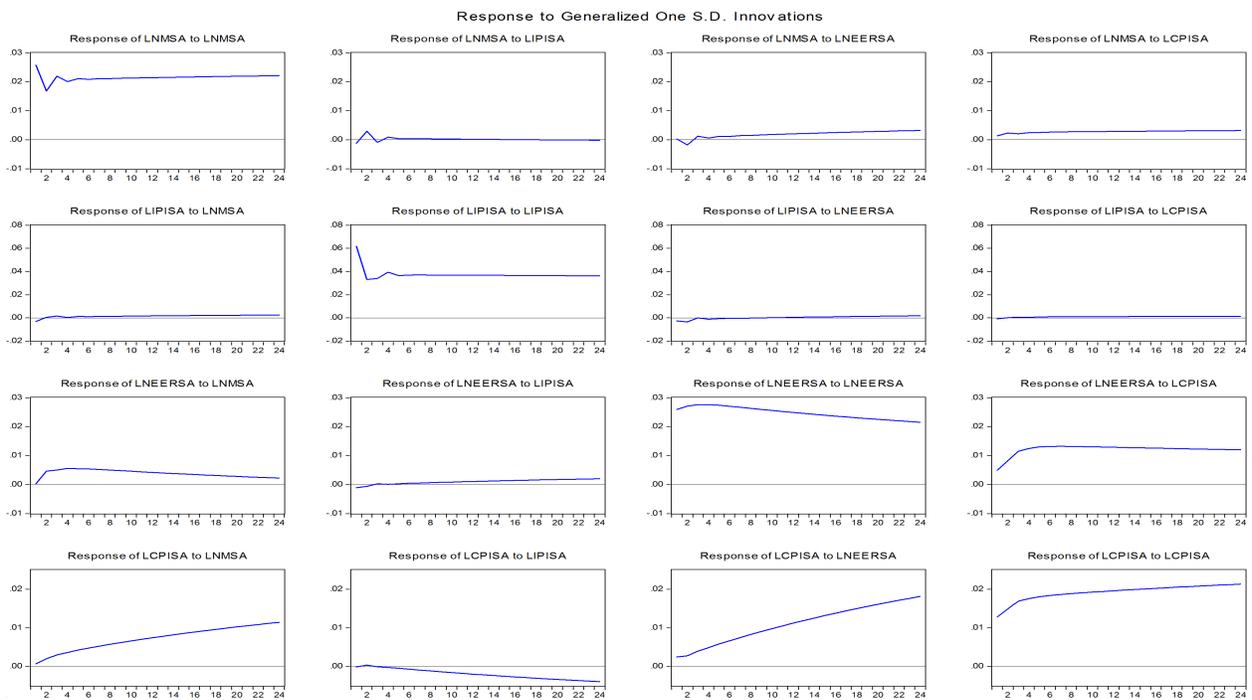


Figure 2: Four-Variable Impulse Responses with Food Prices and Narrow Money: LNMSA, LIPISA, LNEERSA, and LCPISA.

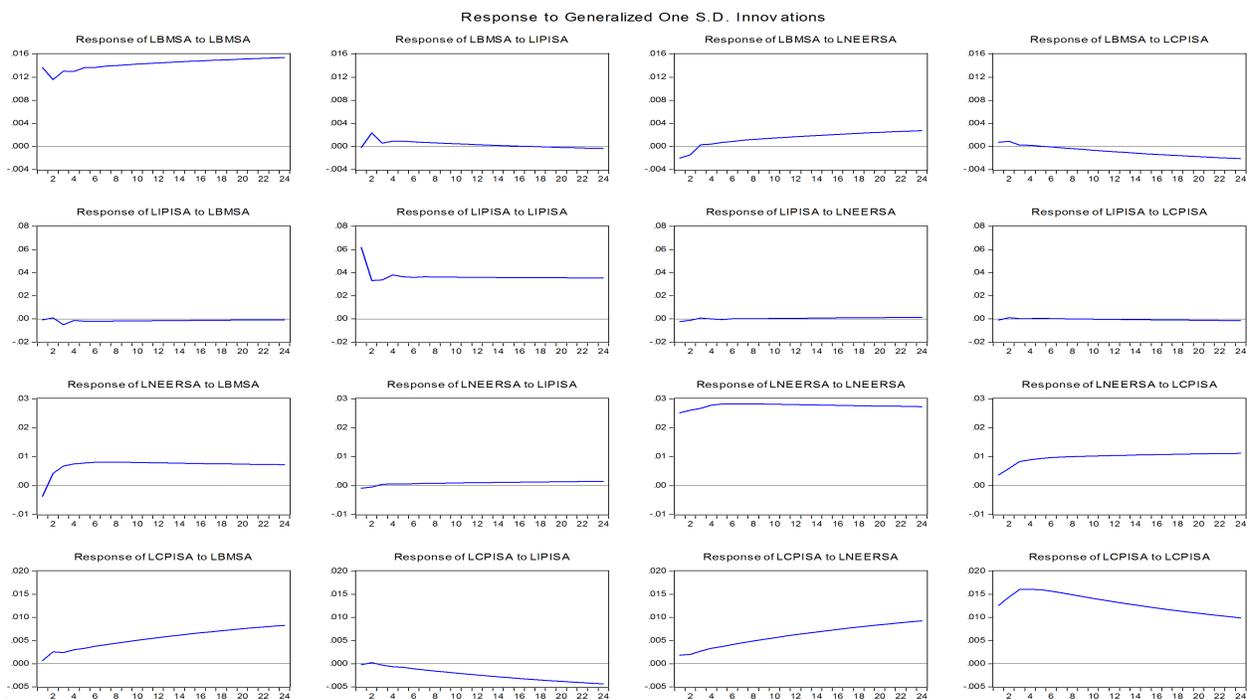


Figure 3: Four-Variable Impulse Responses with Food Prices and Broad Money: LBMSA, LIPISA, LNEERSA, and LCPISA.

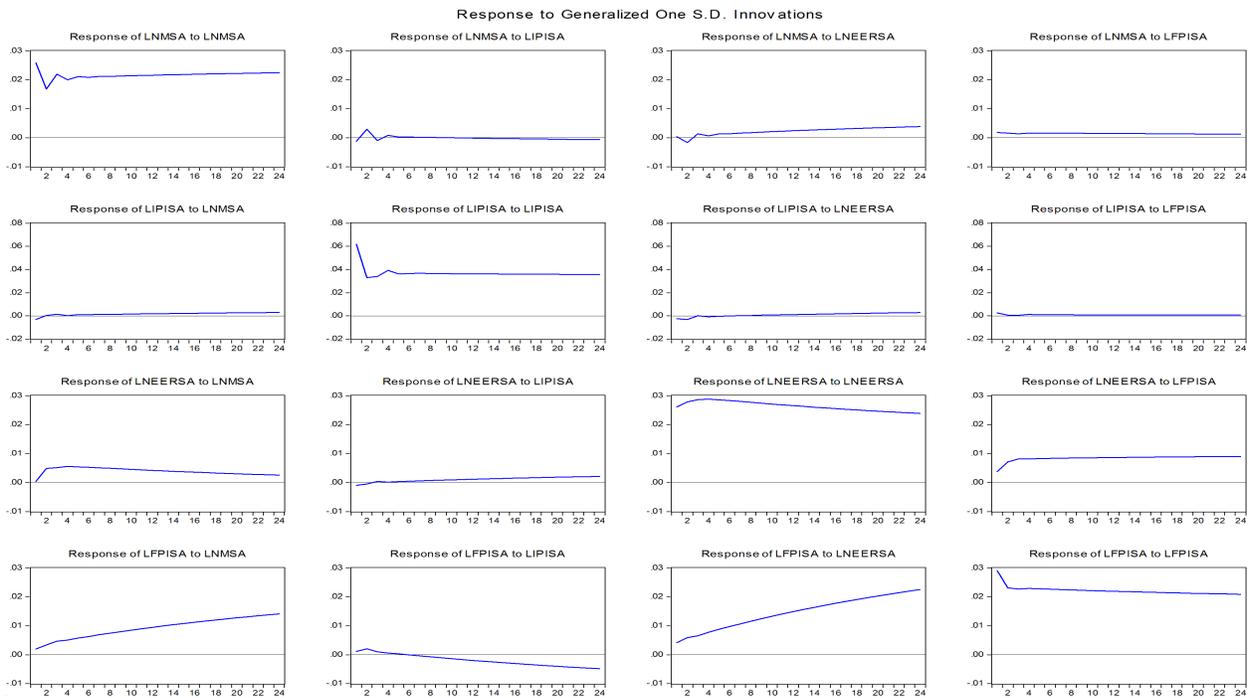


Figure 4: Four-Variable Impulse Responses with Food Prices and Narrow Money: LNMSA, LIPISA, LNEERSA, and LFPISA.

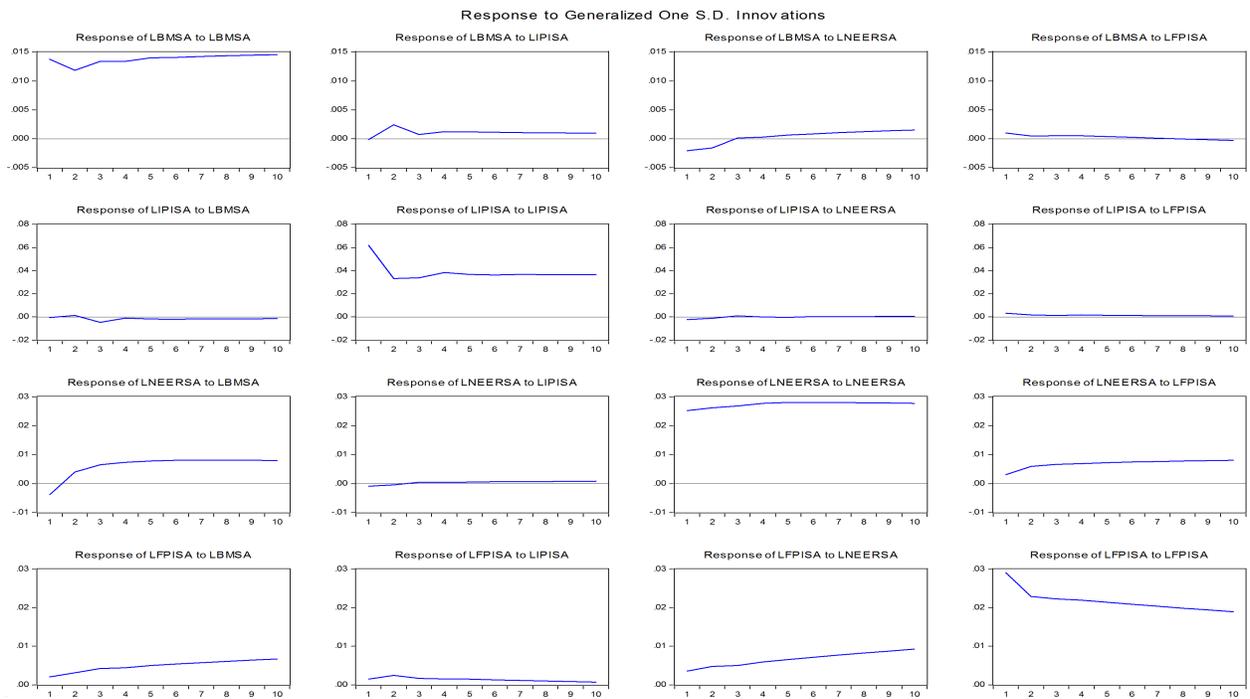


Figure 5: Four-Variable Impulse Responses with Food Prices and Broad Money: LBMSA, LIPISA, LNEERSA, and LFPISA.

prices, but does not have much impact on industrial output. The nominal exchange rate appreciates with monetary expansion. The impulse to narrow money following a rise in consumer or food prices is positive. This suggests that there is a positive feedback between money and prices. The monetary authorities appear to accommodate price increases as a recession-avoidance policy. Such reactions are not automatic, but depend on various factors, including monetary policy objectives, institutional arrangements and policy constraints.

6 Policy Implications and Concluding Remarks

The empirical results obtained in this paper have implications for monetary policy in Bangladesh. As money is not neutral or super-neutral in the short-run, the monetary authorities may be tempted to create inflation surprises to stimulate economic activity. Such action engenders inflation-stability, which may in turn induce monetary authorities to choose imprecise monetary control procedures. If there is political instability, greater ambiguity about monetary policy makes it easier for the monetary authorities to generate inflation surprises to stimulate economic activity. This raises the rates of money growth and inflation on average (Cukierman and Meltzer 1988, Holland 1995). One major policy concern in Bangladesh, due to its perennial political instability, is whether the monetary authorities indeed are tempted to use monetary surprises to stimulate economic activity. There is also opacity in the conduct of policy, especially with respect to the optimal objective and strategy of monetary policy.

The Bangladesh Bank apparently follows a soft form of monetary targeting of monetary policy while trying to stabilise the real economy or promote economic growth. Going forward, it may follow the recent moves of some comparable national economies and switch to inflation targeting. The question is whether this would reduce the significance of monetary aggregates in the conduct of monetary policy. Although in recent years, the interest rate has been used as an instrument to conduct monetary policy under inflation targeting, the money growth rate maintains a long-run link with inflation irrespective of any deployed monetary-policy strategy. McCallum and Nelson (2011) support the view of Lucas (1980) that money-demand stability is not necessary to establish a linkage between money growth and inflation. Controlling the money supply, improving its measurement in the light of financial innovation, and bringing transparency to the conduct of monetary policy are therefore strategic areas in which the Bangladesh Bank can most effectively concentrate its activity in order to maximize its impact on the control of inflation.

Endnotes

1. The relative price of food is measured as the ratio of the food price index to the consumer price index, expressed in percent.
2. The *Quantity Theory of Money* rules out the autonomous factors (such as increases in the prices of specific goods, say, a rise in food prices due to negative supply shocks) from being sources of sustained movements of prices. For details, see McCallum and Nelson (2011).
3. See Hossain (2006), Mellor and Ahmed (1988).
4. The central bank of Bangladesh (Bangladesh Bank) is yet to establish the view that the role of monetary policy is to maintain price stability over the medium-term rather than stabilizing various commodity prices.
5. The sample period is dictated by data availability. The definitions of variables and data sources are provided in section 3.
6. Taka is the currency unit of Bangladesh.
7. Neoclassical economists do not share this view. They argue that money remains neutral even in the short run, unless monetary expansion is unanticipated (Barro 1977; 1978).
8. A rise in the rate of inflation lowers the rate of real return on money and makes capital relatively attractive. Wealth-holders then have incentives to shift their savings from money to capital assuming that money and capital are substitutes. By raising capital intensity, it increases output. This is the Tobin-effect which suggests that money is not super-neutral (Hossain 2009, Tobin 1965). In a poor country, a rise in the expected rate of inflation induces asset holders to adjust their portfolios in favour of real assets, including food items. This establishes a negative relation between real money holdings and the expected rate of inflation which acts as the opportunity cost of holding money.
9. This happened to Bangladesh during the 1974 famine (Hossain 2000).
10. Although this idea was developed in the context of foreign exchange markets, it is also applicable to food market (Bordo 1980, Dornbusch 1976, Frankel 1986, Saghalian, Reed and Marchant 2002).
11. Tweeten (1980) argues that if price shocks are accommodated by expansionary monetary policy in an oligopolistic market environment in the non-agricultural sector, they raise inflation and place agriculture in a price-cost squeeze (see Ardeni and Freebairn 2002, Bordo 1980, Rausser, Chalfant and Stamoulis 1985, Robertson and Orden 1990).
12. The symbols for variables after logarithm transformations are LCPISA, LFPISA, LNMSA, LBMSA,

- LIPISA, LRPFSA and LNEERSA. The prefix “D” is used to represent first-order log difference for the variable concerned. The time-series properties of these variables are reported in Table 1.
13. The ARDL cointegration approach remains valid irrespective of whether the regressors are purely $I(0)$, purely $I(1)$ or mutually cointegrated. Although the ARDL bounds-testing approach does not require pre-testing for unit roots to establish long-run relations among variables, any information gained from unit-root testing may become useful for making inferences once the calculated F -statistic of the test falls inside the critical-value bounds.
 14. In this specification, trend is not included because the data used for estimation purposes are trend-and seasonally-adjusted.
 15. The validity of the bounds-test results relies on the assumption of serially-uncorrelated errors in the estimating regression. Therefore, it is important to select the appropriate lag length, preferably using the AIC or SBC or both. The optimal lag order selected by the AIC is generally higher than that selected by the SBC. In this study, the SBC calculates an optimal lag order of 2. At the risk of overparameterisation, the test results are generated sequentially for an order of lag of up to 12. The results remain robust irrespective of the order of lag used.
 16. The SBC has consistently selected an order of lag 2 for all the specifications.
 17. The coefficient on industrial output bears a negative sign and is statistically highly significant in most specifications. The results are not reported, but would be available upon request.
 18. For a review of the VAR approach and its application to the study of monetary policy, see Cochrane (1988), Sims (1980), Stock and Watson (2001).
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An Investigation of the Relationship between Money Growth and Stock Prices Using Bangladeshi Data

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Abstract

Economic theories argue that growth in money supply affects stock prices positively. This takes place in two steps: an increase in money supply, for given money demand, decreases interest rate, which then increases investment in stocks. In an economy at full capacity, it can, of course, cause inflation to go up, which can also affect stock prices positively through increased demand (Fisher 1930). However, empirical studies show mixed results. In this study, we analyzed the existence and direction of any relationship between money supply and stock prices using Bangladeshi data. This information is important for Bangladesh Bank, as it recently took a contractionary monetary policy stance to curb the boom in the local stock market. If changes in money supply do not have any significant effect on stock prices, then such an action will only interfere with the natural course of the real economy, without achieving its intended outcome.

1 Introduction

Money growth and real economic activities are considered to have a strong and dynamic relationship between them. Although money is a nominal variable and real economic activities are typically analyzed using relative rather than absolute prices, yet it is considered to exert an important influence on the real sector. Central banks are in charge of managing money. The main objective of monetary policy is often to ensure full employment and take care of business cycles by influencing money supply or interest rate.

Stock markets play a very important role in financing real economic activities. A well functioning stock market may generate sufficient economic activities, which in turn can increase the demand for money. Hence, central banks may take this into account when determining monetary policies, though changes in money supply may impact stock market prices as well. Economic intuition tells us that an increase in money supply will affect agents demand for stock products, which will subsequently increase their prices. Still, if an increase in money supply increases real activities, then expected future return on stocks will also increase, which should appreciate stock prices. Therefore, in both cases, money supply should be positively correlated with stock prices.

However, this intuitive explanation may not always work as the effectiveness of these channels depends on smooth functioning of many factors. If an economy accommodates frequent informal transactions, then effec-

tiveness of monetary policies can be adversely affected.

Therefore, it is difficult to predict the direction of relationship between money supply and stock market prices. This issue has been investigated empirically with data from many countries. Some studies produced strong positive results, while others produced strong negative results. However, to the best of our knowledge, there is no such study with data from Bangladesh. This paper fills that gap by investigating the relationship between money supply and stock prices in Bangladesh. To be specific, first, the paper explores whether there exists a stationary long-run relationship between money supply and stock prices, and secondly, if such a relationship exists, the direction of causality. The answers to these questions have important implications for the effectiveness of monetary policy.

The rest of the paper is organized as follows: the next section provides an overview of the relevant literature, followed by summarizing the methodology of investigation and data sources. Section 4 presents the test results, and the last section (Section 5) provides concluding remarks.

2 Literature Review

There is a voluminous theoretical as well as empirical literature on this issue (for a comprehensive survey (Sellin 2001)). We can classify the literature into three groups. The first set of literature comes to the conclusion that money supply and stock prices have a positive relation-

ship, the second set concludes a negative relationship, and the third set shows either insignificant or inconclusive results. For our purpose, we are summarizing a few studies from each set that capture the main ideas and more importantly make the case for an empirical investigation for Bangladesh.

Hamburger and Kochin (1971), Homa and Jaffee (1971) are among the early studies that reported a positive relationship between money supply and stock returns. Their motivation was based on the simple idea that an increase in money supply induces investors to hold more stocks and thus increases their price.

Clear positive results between stock prices and long run demand for money have been found by McCornac (1991) (using Japanese data), Wu and Shea (1993) (using Taiwanese data), and Choudhry (1996) (using data of six countries: Argentina, Greece, India, Mexico, Thailand and Zimbabwe) among others. Nelson (2002), Svensson and Woodford (2003) further indicated that forward-looking firms may respond positively to expected future gain. Carpenter and Lange (2002) showed that stock markets matter for long-run demand for money. Similar studies on South Africa (Hall, Hondroyannis, Swamy and Tavlak 2007), Mexico (Hsing 2007), China (Baharumshah, Mohd and Yol 2009), Hong Kong, Singapore, South Korea and Taiwan (Lee 1998) found positive effect of wealth on money demand. Using data from the United Kingdom, Luintel and Paudyal (2006) found stronger positive results, indicating that the price elasticity of stock return was greater than unity. These results are in line with the observation that higher growth of money not only induces inflation, but also increases economic activities and thus returns on stocks.

Modigliani and Richard (1979) postulated the "*inflation illusion hypothesis*," where they argued that under an inflationary situation people tend to discount expected income more heavily using a higher nominal interest rate. Therefore, stock prices tend to be undervalued when inflation is high and overvalued when inflation is low. This provides an explanation for the negative association between these two variables. Cohn and Lessard (1980) found that stock prices are negatively related to nominal interest rates and inflation in a number of countries (Canada, France, Germany, Italy, Japan, Netherlands, U.K. and U.S.). Geske and Roll (1983), Lee (1992) found a similar negative relationship. A negative relationship was also found by Kim (2003) using German data, Andrangi and Chatrath (2002) using Brazilian data, Amihud (1996) using Israeli data, and Wahlroos and Berglund (1986) using Finnish data. They argued that excess liquidity may increase inflation expectation, which in turn can depress aggregate supply. Lower output may generate lower dividend yield, which in turn can be reflected in

equity prices.

Friedman (1988) presented three different arguments for a positive association: (i) an increase in stock prices is an indication of an increase in nominal wealth which should increase money demand (ii) an increase in stock price indicates a rise in expected returns from risky assets relative to safe assets. This will induce risk averse economic agents to hold larger amount of safer assets, such as money; and, (iii) lastly an increase in stock prices may generate more economic activities which in turn will raise the volume of financial transactions. Using quarterly data from 1961 to 1986 and annual data from 1886 to 1985 for the United States, he found inconclusive results.

Corallo (2006) using data from Germany and the U.K. found that this relationship is not statistically significant. Engsted and Tanggaard (2002) found that the relationship between expected returns and inflation is positive, but weak. Boucher (2004) also found that the empirical evidence between these variables is weak.

McCornac (1991) using Japanese data from 1975 to 1988 found insignificant effects. Durham (2003) indicates that the impact of monetary policy on equity returns is weak and is sensitive both to the measure of monetary policy used and to the estimation period. He used data from a number of industrialized countries. Bruggeman, Donati and Warne (2003) suggest an insignificant wealth effect on Euro area data.

While we cannot get a clear picture from either the theoretical or the empirical literature, it appears that there are many factors that can potentially affect this relationship, and hence, a unified theory is difficult to propose. This conclusion has got support from many researchers (Brandt and Wang 2003, James, Koreisha and Partch 1985, Kaul 1987, Lee 1992).

Furthermore, Fama (1981; 1983) argued that a fall in expected output would decrease the demand for money in the economy and therefore with a given supply, would cause inflation. Therefore, the negative relationship between stock performance and inflation is just the flip side of the positive relationship between real money demand and real economic activity. In a later study, Gallagher and Taylor (2002) found that only a permanent increase in money supply has a negative impact on expected future output growth.

On the other hand, Boudoukh and Richardson (1993) found that equity returns in the United States are positively related to inflation for longer periods only, but not for short periods. Such a time-dependency has been found in Durham (2003), He (2006) as well. Finally, the relationship may also be different across countries. Hence, it is worthwhile to investigate this issue empirically using Bangladeshi data.

3 Methodology and Data Sources

Since time series are likely to have unit roots, results of ordinary least square (OLS) regressions can produce spurious results rather than showing the true long-run relationship. This study therefore applies cointegration analysis for testing the existence of any long-term relationship between money growth and stock prices. Some of the earlier studies mentioned in the literature review section have also used this methodology. The Johansen cointegration procedure provides a unified framework for estimation and testing of cointegration relationship in the context of Vector Autoregressive (VAR) error correction models. For this approach, we estimate an Unrestricted Vector of Autocorrelation of the form:

$$\begin{aligned} \Delta x_t = & \alpha + \theta_1 \Delta x_{t-1} + \theta_2 \Delta x_{t-2} + \theta_3 \Delta x_{t-3} \\ & + \cdots + \theta_{k-1} \Delta x_{t-k+1} + \theta_k \Delta x_{t-k} \\ & + u_t \end{aligned}$$

where Δ is the difference operator, x_t is a $(n \times 1)$ vector of $I(1)$ variables and u_t is a $(n \times 1)$ vector of random errors.

The matrix θ_k contains information on the long-run relationship between variables. If the rank of $\theta_k = 0$, the variables are not cointegrated. On the other hand, if rank r is equal to one, there exists one cointegrating vector and finally if $1 < r < n$, there are multiple cointegrating vectors. Johansen and Juselius (1990) derived two tests for cointegration, namely the trace test and the maximum Eigen value test. The trace statistic evaluates the null hypothesis that there are at most r cointegrating vectors in x_t , whereas the maximal Eigen value test evaluates the null hypothesis that there are exactly r cointegrating vectors in x_t .

When two variables are cointegrated, there is at least one direction of causality. Granger causality test, introduced by Granger (1969; 1980; 1988), is one of the important methods that has been much studied and used in empirical economics and finance. Engle and Granger (1987) have found that the existence of non-stationarity can give misleading conclusions in the Granger causality test. It is only possible to infer a causal long-run relationship between non-stationary variables when the variables are cointegrated. For example, if y and x are the variables of interest, then the Granger causality test determines whether past values of y add to the explanation of current values of x as provided by information in past values of x itself. If past changes in y do not help explain current changes in x , then y does not Granger cause x . Similarly, we can investigate whether x Granger causes y by interchanging them and repeating the process.

To conduct the Granger causality test, the following two sets of equation are estimated for all possible pairs of

(x, y) series in the group:

$$\begin{aligned} x_t = & \alpha_0 + \alpha_1 x_{t-1} + \cdots + \alpha_l x_{t-l} \\ & + \beta_1 y_{t-1} + \cdots + \beta_l y_{t-l} \\ & + u_t \end{aligned}$$

$$\begin{aligned} y_t = & \alpha_0 + \alpha_1 y_{t-1} + \cdots + \alpha_l y_{t-l} \\ & + \beta_1 x_{t-1} + \cdots + \beta_l x_{t-l} \\ & + v_t \end{aligned}$$

The reported F -statistics are the Wald statistics for the joint hypothesis: $\beta_1 = \beta_2 = \beta_3 = \cdots = \beta_l = 0$. Further details of this methodology can be found in any graduate time series analysis text (Hamilton 1994).

Annual data for broad money (M2) and real interest rate (RIR) have been collected from the World Bank's data bank and data for the consumer price index (CPI) and all share price index of Dhaka Stock Exchange (DSE) have been collected from the Bureau of Bangladesh Statistics and Dhaka Stock Exchange, respectively. Data expands from 1995 to 2009, which is mostly dictated by their availability. EViews 7.0 is used to perform the econometric works.

4 Test Results

Unit root test results of the variables are presented in Table 1. We performed both Augmented Dickey Fuller (ADF) test and Phillips Perron (PP) test. Results of both tests generally arrive at the same conclusion. We found DSE and RIR to be stationary at first difference and CPI and M2 stationary at second difference. However, to make variables compatible in the cointegration exercise, we used growth rates of CPI and M2 as indicators of inflation and money supply, respectively.

In the cointegration front, we found a number of relationships. First, we found (see Table 2) that DSE stock index (DSE) is cointegrated separately with inflation (measured as growth of CPI), growth of M2, and real interest rate (RIR), all at 5% confidence interval. In the case of deposit rate, the existence of a cointegration relationship is found at 10% confidence interval.

Regarding directions of causality, applying the Granger causality test, we found that money growth and deposit rate precede stock prices, and inflation and real interest rate follow stock prices (see Table 3). We also found that money supply growth creates a positive effect on DSE index and higher DSE index affects real interest rate negatively. Results have been reported in Table 4. These results indicate that movements in DSE are more associated with availability of money than movements of market fundamentals. The negative impact of a booming stock market on real interest rate appears to be contradictory to the fundamentals of finance. However, in the case

Table 1: Unit Root Test

Variable	ADF test result	PP test result
CPI	<i>I</i> (2)	<i>I</i> (2)
DSE	<i>I</i> (1)	<i>I</i> (1)
RIR	<i>I</i> (1)	<i>I</i> (1)
M2	<i>I</i> (2)	<i>I</i> (2)
Deposit rate	<i>I</i> (1)	<i>I</i> (1)

Notes: Details available on request.

Table 2: Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	DSE and CPI		DSE and M2		DSE and RIR		DSE and Deposit rate	
	Eigen Value	Trace Statistic	Eigen Value	Trace Statistic	Eigen Value	Trace Statistic	Eigen Value	Trace Statistic
None	0.66	16.72 (0.03)	0.48	13.79 (0.03)	0.65	17.02 (0.03)	0.55	13.27 (0.10)
At most 1	0.03	0.46 ^a (0.50)	0.19	3.45 ^a (0.08)	0.002	0.03 ^a (0.86)	0.02	0.37 ^b (0.54)

^a Trace test indicates 1 cointegrating equation at the 0.05 level

^b Trace test indicates 1 cointegrating equation at the 0.10 level

^c The numbers in parentheses are MacKinnon, Huang and Michelis (1999) *p*-values

of rising DSE index, this may make sense as a booming Dhaka stock market may attract investors (many of whom lack proper knowledge about financial markets) into the stock market, which may create temporary shortage of funds in real sectors, resulting in a slowdown. Irrational exuberance among investors about the stock market may also cause economy wide inflation.

5 Conclusions

This study analyzes the existence and direction of any long-term relationship between money supply and stock prices using Bangladeshi data. The Johansen cointegration test results suggest that DSE stock index is cointegrated with money growth, inflation and real interest rate in Bangladesh. The Granger causality test results suggest that money growth and deposit rate precede stock prices, and inflation and real interest rate follow stock prices. Finally, regression results suggest that money supply growth creates a positive effect on DSE index and higher DSE index affects real interest rate negatively.

Bangladesh Bank recently took a contractionary monetary policy stance to curb the local stock market boom. This study finds that money supply growth indeed has statistically significant positive effect on DSE stock index, which lends support to Bangladesh Bank's pursuing contractionary monetary policy to rein in stock prices. If

changes in monetary policy did not have any significant effect on stock prices, then such an action would have only interfered with the natural course of the real economy, without achieving its intended outcome.

This study is not, however, advocating for explicit central bank intervention in Bangladeshi stock market. Bangladesh Bank should tread any such intervention with caution, as any official announcement from Bangladesh Bank regarding changes in its monetary policies may trigger overshooting in the stock market and ultimately cause more losses than gains. However, if the central bank can act subtly without delivering any explicit signal to investors, that may bring effective results to curb stock price inflation, which became a concern for the financial sector before this persistent bearish trend.

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Table 3: Granger Causality Test

	$X = \text{DCPI}$ $Y = \text{DSE}$	$X = \text{DM2}$ $Y = \text{DSE}$	$X = \text{RIR}$ $Y = \text{DSE}$	$X = \text{Deposit Rate}$ $Y = \text{DSE}$
Null Hypothesis:	F -statistic	F -statistic	F -statistic	F -statistic
X does not Granger cause Y	2.34 (0.15) ^c	7.30 ^a (0.02) ^c	0.61 (0.56) ^c	13.91 ^a (0.01) ^c
Y does not Granger cause X	4.71 ^b (0.04) ^c	1.44 (0.25) ^c	3.03 ^b (0.09) ^c	0.45 (0.77) ^c

^aTest indicates X Granger causes Y ^bTest indicates Y Granger causes X ^cThe numbers in parentheses are p -values of estimated statistics**Table 4:** Money Supply Growth Creates a Positive Effect on DSE Index and Negatively Effect on Real Interest

Variable	Coefficient	Std. Error	t -Statistic	Probability
<i>Sample (adjusted): 1993–2009, Dependent Variable: DSE</i>				
Constant	544.39	256.72	2.12	0.05
DM2	4.07×10^{-09}	9.44×10^{-10}	4.31	0.001
R -squared	0.55	Akaike info criterion		15.97
Adjusted R -squared	0.52	Schwarz criterion		16.07
S.E. of regression	673.25	Durbin-Watson statistic		1.78
F -statistic	18.59	Probability (F -statistic)		0.001
<i>Sample: 1992–2009, Dependent Variable: RIR</i>				
Constant	11.83	0.85	13.7	0.00
DM2	-0.001	0.001	-2.43	0.03
R -squared	0.27	Akaike info criterion		4.43
Adjusted R -squared	0.22	Schwarz criterion		4.53
S.E. of regression	2.11	Durbin-Watson statistic		1.65
F -statistic	5.92	Probability (F -statistic)		0.03

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“Inclusive Education” In Bangladesh: Accounting For the Friction Between Policy and Practice

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Abstract

The purpose of this paper is to provide a better understanding of the ideological friction between the policy and practice of “*inclusive education*” in Bangladesh. Despite the government’s stated commitment to a human rights agenda, its post-independence reliance on patron-client relationships—and public/private partnerships in more recent times—has weakened its ability to implement strong reform. As we argue here, the adoption of a nonliberal form of economic rationality throughout the goods and services sector of Bangladesh has meant that the philosophy of “*progress*” now sits completely at odds with the philosophical premises of “*inclusion*.” Despite the “*impossibility*” of enacting a “*thick*” theory of inclusion in Bangladesh, we nonetheless argue that it is possible to “*thicken*” the “*thin*” theory that has arisen by default. The problem of creating a new culture of mutual respect—rather than indifference—is a broader cognitive-perspectival problem that requires an entire reassessment of our relational and valuational sensibilities (Hill 2007).

1 Introduction: Bangladesh’s Dilemma

The exclusion of any group or individual from the education sector equates to a lifetime of struggle and material poverty. This is nowhere more true than in twenty-first century Bangladesh. Decades of underdevelopment have left huge gaps in the educational infrastructure that are only now being remedied by government intervention. Although Bangladesh has been consistent in its embrace of the philosophy and practice of social equity—these principles being enshrined in its Constitution after achieving independence from Pakistan in 1971—it has only really been in the last three decades that significant progress has been taken towards establishing “*a uniform mass-oriented and universal system of education*” that would be both “*free and compulsory . . . to all children*” (Bangladesh Government 1972). With the help of overseas donor aid, huge injections of money have led to the rapid expansion of school buildings, staffing, and resources.

The scale of infrastructure provision is enormous. About 12% of Bangladesh’s approximately 150 million are school-age children (UNESCO 2011). Significant strides have been made over the last few decades to provide this sector with access to schooling with the number of primary enrolments having almost doubled from about 8.9 million in 1985 to over 16 million in 2005

(World Bank 2008). One reason behind this success has doubtlessly been the introduction of the Primary Education Development Project (PEDP). Beginning in 1997, the overall objective of this initiative was “*to establish an efficient, inclusive, and equitable primary education system delivering effective and relevant child-friendly learning to all Bangladesh’s children from pre-primary through Grade V primary [Grade V is equivalent to the upper primary school level with children between 12 and 13]*” (DPE 2011, p. vi). With the project now in its third phase, the focus for this 2011 period onwards is on the integration of the services being offered; the unification of provision between the public, NGOs and private providers; a reduction in class size; improvements in the quality of teaching and learning; decentralising primary administration and management; and a drive towards increasing public/private partnerships (DPE 2011, p. vi). More significantly, the government has stated its firm commitment towards improving the lives of the most marginalised within Bangladesh; that is, women, indigenous people, and the disabled.

As mandated by Article 18 of the Constitution, those with disabilities had their right to receive “*compulsory*” and “*free*” education in a regular classroom setting recognised in 1972 (Constitution of the People’s Republic of Bangladesh, 1972). Be that as it may, the practical reality has been that educational provision has been so scarce that whatever provision exists, it has been established in

such an ad hoc fashion that little to no thought has been given to the specific requirements of any group other than to the able-bodied—despite the government’s stated commitment to equality in the Disability Welfare Act (Ministry of Social Welfare 2001). So although a push towards the “*integration of students with disabilities in the usual classroom set-up of regular normal schools*” has been advocated “*wherever possible*” by the politicians (Ministry of Social Welfare 2001), often factors such as the physical location of schools, the type and lay-out of the classroom buildings and the general levels of institutional under-resourcing that has been a continuous feature of Bangladeshi schooling, have led to the inevitable and continual exclusion of all but the least-affected of the disabled.

Figures for school attendance seem to bear this out. In recent figures released by the Bangladesh Centre for Services and Information on Disability (CSID), of an estimated 15% of the disabled population,¹ only 4% of disabled children were accessing any educational, recreational or leisure activities (CSID 2011). Despite the government’s professed commitment to equal access and participation of the disabled in schooling, the number of Bangladeshi children with “*unmet needs*” is still significantly disproportionate to the number of those who have had their needs recognised and supported.² Unfortunately, irony lies behind the phrase, “*mainstreaming for inclusion*.” As numerous commentators of “*inclusive education*” have argued, the most significant barrier to inclusive educational policy and practice occurs where “*mainstreaming*” equates simplistically to those children with “*special needs*” being expected to adapt or integrate into an already-established system (Allen 2009; 2003, Armstrong 2010, Loxley and Thomas 2001, Smith 2010, Terzi 2010, Ware 2004).

The purpose of our paper is to illustrate this point with reference to the policies and practices being implemented in Bangladesh under the banner “*inclusive education*.” As we want to show, there are competing discourses about inclusion and it is necessary to identify the contradictions between the lived experience of “*progress*” and the rhetoric of policy. Despite the efforts of those working towards introducing a philosophy of inclusion into Bangladesh (Khan 2011, Thornton 2006), it is nonetheless vital to acknowledge that there are competing discourses of “*inclusion*” at play. We would argue that this confusion has often been mapped out inadequately in the literature so that beneath what appears to be unified support for “*inclusive education*,” different groups are championing different outcomes. We attempt to provide here a better understanding of the friction between the various discourses; one which shows how efforts to mainstream people with disabilities nonetheless remain an unwitting force that perpetuates rather than remedies the discrimina-

tion that Bangladesh’s Constitution attempts to disavow.

In the next section of our paper, we discuss the tension that needs to be identified in the literature about “*inclusion*” between the discourse and ethos of a human rights perspective and that of a human utility (resource) perspective. As various Bangladeshi commentators have argued, tensions have become exacerbated since the late 1970s when the dominance of an economic form of rationality began to undermine attempts to promote a human rights agenda. This friction, in turn, has curtailed the growth of what we here identify as a “*thicker*” theory of inclusion; one bent on transforming the rhetoric of “*inclusion*” into practice. As we see exemplified in Bangladesh, a thinner theory of “*inclusive education*” holds sway; one in which the “*mainstreaming of disability*” has now become the narrower focus of policy and practice.

2 The Human Rights / Human Utility Tension

Bangladesh has always had the unenviable reputation for being one of the most densely populated and poorest nations in the world. Efforts at reversing the circle of poverty by making Bangladesh “*an export powerhouse*” led to the injection of 15 billion US dollars from the World Bank alone since 1972 (World Bank 2012).³ Enormous amounts of capital have been loaned to Bangladesh by other global donors in an attempt to achieve the goal of making it a “*middle-income country by 2021*”—a date which is the 50th jubilee of Bangladesh’s independence (World Bank 2012). Extending educational services has been integral to this endeavour.

Having legislated for compulsory primary-school attendance in 1990 (DPE 2011), the focus is now on expanding provision as quickly as possible (BANBEIS 2010). Two key reasons have been given to justify this goal: (1) it is a fundamental human right to provide the citizens of every nation with educational opportunities in order for them to lead a more fulfilled life, and (2) improving the performance of the domestic economy will follow if the contribution of every human being is recognised as strategically important in securing the wealth of the nation (Ministry of Education 2010). The goal of implementing an “*inclusive education*” agenda has been chosen as the means to bring education to as many as possible. Previous attempts to cater for people with disabilities by exclusion and “*special provision*” have been acknowledged worldwide in education as limited and limiting to individuals from a more robust human rights perspective (Allen 2009; 2003, Armstrong 2010, Smith 2010). Mounting evidence convinced educators to abandon the “*special needs*” categorisation of children and to end the isolation associated with special educational policy and practice. “*Special ed-*

ucation” was deemed to be less about enhancing the quality of the experiences of those with disabilities and more about practices of convenience for the teachers and those deemed “normal.” Removing the “*more demanding children*” from the ordinary classroom was a significant reason for their exclusion from mainstream schools (Thomas and Loxley 2001).

“*Inclusive education*” has become a term that has therefore been embraced in schooling policy and practice worldwide (Allen 2009; 2003, Armstrong 2010, Smith 2010). In keeping with the socialist principles of the Constitution, Bangladesh has ratified several pieces of key legislation promoting the rights of children and disabled persons. It has recognised that the disabled child has the right to “*enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child’s active participation in the community*” (UNCRC 1989, p. 7). It has also agreed to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Salamanca Statement and Framework for Action. The Statement and Framework called on governments to give the highest priority to inclusive education, going so far as to highlight that “*educational systems be designed and programmes implemented*” to take account of “*the wide diversity of [the] characteristics and needs [of every child]*” (UNESCO 1994, p. viii). In like manner, “*full and effective participation and inclusion in society*” based on the tenets of “*respect for difference and acceptance of persons with disabilities as part of human diversity and humanity*” were principles agreed to when ratifying the Convention on the Rights of Persons with Disabilities in 2006 (UN 2006).

The sentiments upheld in all this legislation are significant. Inherent within the wording of these manifestos is a powerful ideological subtext that challenges the common binary that had previously dominated the discourse; the distinction between the “*normal*” and “*abnormal*.” The philosophy behind inclusion as a human right is one based on the recognition of persons as “*ends in themselves*,” deserving of a standard of dignity based on the equal entitlement of all persons to “*life, liberty and the security of personhood*” (Article 3). This is much more than a mere theoretical distinction. It ratifies the very foundation of what it means to be human and what it means to be deserving of the prerogatives that have been acknowledged in the conventions and treaties that Bangladesh has ratified. In this respect, the role of government is to be presumed active rather than passive. Its role must be to fashion a collective consciousness that aids and abets such principles (Murray 2011, p. 42). This means it must both model and champion principles of equity and social justice within civil society through its own administrative measures using policy as its means (Schurmann and Mahmud 2009).

Numerous problems have been identified by commentators about the structure of governance operating in Bangladesh and the extent to which it has the ability to engender the spirit of co-operation needed to do so (Croft 2010, Davis 2001, Hossain 2004, Khan 2000, Kochanek 1993; 1996, Sarker 2007, Sobhan 2004). Ongoing friction between rival political parties has always been acute and these divisions have served to “*control, co-opt and divide*” civil society at an ideological level (Tisman 2007, p. 244). This historical legacy of entrenched petty politics and corruption has served to reduce the nation’s ability to generate democratic norms, articulate universal interests, or hold the lead party in government to account. The problems associated with what has been termed “*patron-client*” politics (Kochanek 1993) has had a significant impact upon the growing divide between the rhetoric and reality of practice (Harque 2002, Khan 1998; 2000, Schurmann and Mahmud 2009, Tisman 2007). This had led at least one writer to describe the State of Bangladesh as a “*franchise state*” (Davis 2001) with essential public services being run by NGOs, financed by extensive donor backing (Lewis 2010, p. 42).

“*Patron-client politics*” has been defined as “*an exchange relationship or instrumental friendship between two individuals of different status*” (Scott and Kerkvliet, 1973, cited in Sidel 1989, p. 502). As the concept implies, instrumentalism is a form of relationship in which each party recognises the other as the means by which they can achieve their own ends. Importantly, unlike a relationship based on recognition of the inherent dignity or worth of the person qua person, deserving of equal respect and fair treatment because of their inherent “*humanity*,” an instrumental relationship is based solely on the “*use value*” or “*utility*” of each party. “*Mutual indifference*” rather than “*mutual respect*” defines these types of relationships; meaning that if there is no “*use value*” evident, there need be no reason to recognise the rights of the other party or to show a duty of care towards them (Hossain 2004, Platteau 1995). Instrumentalist relations necessarily undermine the foundations of civil society based on a “*human rights*” foundation because the broader responsibilities the state and its individuals hold towards each other mean that the concept of the “*citizen*” is replaced by the concept of “*client*.” Undoubtedly, the scarcity of the necessary resources for life in Bangladesh has nurtured these instrumentalist patron-client relationships such that policymaking has been far from “*neutral*” in this form of “*exchange*” (Hossain 2004, Kochanek 1996).

What we have witnessed from the late 1970s has been the further consolidation of instrumentalism rather than human rights based relationships. The global dominance of a neoliberal form of rationality has further added to the compromise of a human rights’ agenda enhancing the sectarianism seen in “*clientist networks*” (Harvey

2005). Briefly, the philosophy of neoliberalism asserts the premise that competition is the natural state of human beings. Natural attrition among a species is part and parcel of optimising the gene pool so that the fittest and most resilient survive. The market is advanced as neutral to the interests of those needing to exchange their goods and services; where competition again separates the “strong” from the “weak.” Neoliberalism therefore upholds the principles of “*natural selection*” and “*natural attrition*.” The “*resourceful*” individual is meritorious and deserving of the advantages s/he wins. State control is best kept to a minimum to maximise the efficiencies of the market.

As educators have witnessed the world over, a neoliberal philosophy applied to schools and schooling has been translated into a competitive culture of performance (Hill and Roskam 2009, Marginson 1997). The reason for the existence of schools, according to a neoliberal perspective, is to provide a service to society by enhancing the performance of individuals in the market. “*Education*” becomes a tradable commodity; schooling a business. Like good businesses and bad, schools differ in their success of “*adding value*” to their “*customers*.” League tables attempt to standardise information about each school’s “*performance*,” ranking institutions hierarchically according to their value-adding success (Khan 2009). As with any “*utility*,” a lower cost/higher profit ratio is sought, often achieved by pre-selection of the “*raw material*” to ensure there will be fewer extraneous costs associated in processing the “*product*.” The privatization of many schools has led to more homogeneous groupings of students who concomitantly have less exposure to the population difference representative within their community. The philosophy behind “*special schools*” is the very philosophy that is embraced by a neoliberal perspective; ironically the philosophy rejected by inclusive educators.

Table 1 summarises the tension we have discussed between these two underlying philosophies. In the next section of our paper, we turn to a further set of divisions evident in the rhetoric of “*inclusive education*.”

This is a more subtle divide between those who see mainstreaming of the disabled as preferable to isolating individuals from others in special educational facilities, and those who understand the wider—more “*radical*”—ideological implications of what they see as a “*genuinely inclusive*” educational policy (Wilton and Schuer 2006, p. 43). Given the tenuous nature of democratic governance in the history and culture of Bangladesh, and the prevalence of instrumentalist relations, what is possible at the moment is a more modest “*thin*” theory of inclusion. This differs from the “*thicker*” theory of inclusion many educational advocates more recently have been attempting to champion.

3 “*Thin*” and “*Thick*” Versions of Inclusion

As we have seen in the section above, a major tension exists between Bangladesh’s recognised commitment to “*equality for all*” and traditional forms of exchange that have come to dominate the country historically and culturally. Despite the nation’s ratification of human rights treaties and legislation, vigorous competition for scarce resources has meant the dominance of instrumentalist relationships and a weak tradition of participatory democracy. A history of allocating limited government resources towards the urban, wealthy sectors has left its own legacy of social inequality among the rural and the indigenous poor (Davis 2001, Sarker and Davey 2009). Although it can be conceded that huge strides have been taken to provide “*education for all*,” particularly by means of the Primary Education Development Projects, these reforms have been necessarily limited by this legacy. It is against this background that we need to recognise the distance ideologically between the normative and historical “*survival of the fittest*” mentality operating within Bangladesh and the alternative anti-competitive and “*inclusive*” ideology espoused within a human rights, legislative agenda.

It is this conceptual distance that accounts for the “*friction*” we have seen between the stated policy and actual practice. Despite the intention to create a more inclusive schooling environment, mainstreaming generally provides only “*access benefits*” to those with mild to moderate impairments. Because the schooling infrastructure has remained intact, and because of the performative framework that has been indicative of Bangladesh’s schooling culture, “*integration*” rather than “*inclusion*” is occurring (Yan and Jament 2009). The system has largely remained static, other than accommodating for the few who are able to be integrated without too much disruption to the ongoing programme. This “*minimum cost*”—cost referring both to the economic and organisational impact—is partially to be expected in a developing nation. The emphasis is clearly on “*numbers*,” getting as many children as possible into some type of learning facility. Double-shifts have become the norm with different waves of students attending at different times of the day.

This pressure on space is also matched by a scarcity of teachers, with pupil-teachers often filling the void where staff are needed in hard-to-staff schools. This factor, plus the reality of larger class sizes, dictates a curriculum and pedagogy that is predominantly textbook-driven. Student “*success*” is measured accordingly by examination performance. As many have argued, unless teacher remuneration becomes much more attractive, the best and brightest will continue to be discouraged from pursuing teaching as a career. The same applies to those working within

Table 1: The Human Rights and Human Utility Tension

<p>Humans are a “<i>Resource</i>” or “<i>Utility</i>”</p> <ul style="list-style-type: none"> • Humans are the means to others’ ends • Relationships are based on mutual indifference • The value of a human being is how “<i>useful</i>” they are • The prevailing ideology is that of competition and “<i>survival of the fittest</i>”
<p>Humans are “<i>Rights-Bearing Beings</i>”</p> <ul style="list-style-type: none"> • Humans are ends in themselves • Relationships are based on mutual respect • All humans have equal value qua “<i>being human</i>” • The prevailing ideology is that of co-operation

the teacher education sector more generally. Teaching needs to become a more valued profession in Bangladesh to attract and retain quality staff. All of these findings have been borne out by the research evidence (Ahsan and Burnip 2007, Ahsan, Sharma and Deppeler 2011; 2012, Khan 2011, Kibria 2005, Mullick and Deppeler 2011, Rahaman 2011, Rahaman and Sutherland 2011; 2012, Sharma 2011).

Table 2 captures the ideological dimension of the problem being faced in Bangladesh’s efforts towards implementing a more inclusive education agenda. This diagram “*explains*” why researchers are finding that a coalition of reforms across a number of overlapping domains must occur before meaningful changes can occur towards inclusion. To illustrate what we mean, for example, a significant reason why the disabled are disproportionately excluded from key social services has been because of a lack of awareness regarding their entitlements (Sharma 2011). Communication is difficult among a dispersed and predominately illiterate population. Even when there is knowledge of such legislation, schooling is often seen to be much more of a “*cost*” than an “*opportunity*.” With at least 80% of disabled children living in low-income families below the poverty line (Alam, Haque and Siddique 2005), children will naturally be seen as important wage-earning units within the family. Until socio-economic stress is alleviated for such families, they *will* feel that there is no other choice.

The findings of many studies in health and education show management practices that are clearly at odds with securing greater gains for Bangladesh’s most marginal sections of the population (Alam et al. 2005, Hossain 2004, Schurmann and Mahmud 2009). The dominance of neoliberal economic thinking is now being reported as a growing obstacle to the concessions needed to achieve real gains for this sector (Rahman 2012). Regardless of the good intentions of government policy initiatives, the neoliberal philosophical and managerial model in operation within the health and education sector has created

hierarchical forms of accountability that are at odds completely with the ethos of these enterprises (Alam et al. 2005, Mullick and Deppeler 2011, Rahman 2012, Schurmann and Mahmud 2009). In addition to the existing patron-client networks, public-private partnerships, condoned by the government in mid-2009, have started to spread (The Asia Foundation 2000). As one writer has commented, the failure of the public sector and the growth of private ventures cannot be seen as entirely independent events (Wettenhall 2003). It is the inability of the government to meet its responsibilities to its own people that has led to the growth of for-profit private schools and tertiary institutions throughout Bangladesh (Alam et al. 2005, The Asia Foundation 2010, Wettenhall 2003). These private ventures are commercial ventures. They ultimately exacerbate the inequality divide by sanctioning “*wealth flight*,” where children of the rich are segregated from the poor (Atkinson and Blandy 2005, Dyson and Millward 1999).

In this respect we concur with authors such as Armstrong, Armstrong, Armstrong and Spandagou (2011) who associate the problem of inclusion beyond education as a “*site*.” The greater problem is whether social diversity is valued—or not. A “*thick*” theory of “*inclusive education*” therefore broadens the parameters of our conception of “*education*” so that when we talk about education for inclusion, we start to see that we are not just talking about formal teaching and learning curricula, pedagogies and assessment practices for a group labelled “*the disabled*.” We are talking about the need to change social norms: to change society’s perspective about “*difference*.” As illustrated in Table 2, thinking differently about inclusion involves destabilizing the familiar—but unhelpful—binaries that have previously functioned to “*name*” and “*exclude*.” Particularly unhelpful has been the way in which the “*abnormal*” has been juxtaposed against a “*norm*,” a mode of categorisation and thought that invites exclusionary policy and practice. Without a significant ideological shift away from the tendency to

Table 2: The Difference Between the “Thin” and the “Thick” Theories of Inclusion

	Special Education
Less Inclusion	<ul style="list-style-type: none"> • Underpinned by a philosophy of abnormality or exceptionality • Often labelled as “<i>special needs</i>” • Provision of separate facilities for the convenience of all parties • Exclusive of mainstream and isolationist • Preparation to “<i>integrate</i>” students into mainstream society
↑	
↑	
Human Resource Utility Ideology	Inclusion — “Thin” Theory
↑	<ul style="list-style-type: none"> • Based on the philosophy of competitive individualism and economic rationality • Encourages the inclusion of “<i>abnormal</i>” or “<i>exceptional</i>” students into mainstream facilities • “<i>Integration</i>” rather than “<i>inclusion</i>” • Few, if any, changes are made to the existing curriculum, pedagogy or assessment regime
↑	
↑	
↑	
↓	
Human-Rights Based Ideology	Inclusion — “Thick” Theory
↓	<ul style="list-style-type: none"> • Based on a philosophy of “<i>difference</i>” rather than the binary “<i>normal/abnormal</i>” • Fosters co-operation rather than competition • Recognition of population variability • Accepts the validity of “<i>difference</i>” • Begins with equipping all to live a full and complete “<i>good life</i>”
↓	
More Inclusion	

view people as “*resources*”—and the disabled as “*damaged*” goods at that—no amount of “*schooling*” will alleviate such prejudices.

Although many inclusive educators recognise the “*impossibility*” of implementing a genuinely “*thick*” theory of inclusion (Allen 2009, Ferguson 1995, García-Huidobro and Corvalán 2009, Thomas and Loxley 2001), it is nonetheless possible to “*thicken*” the “*thin*” by challenging sectarian policies and practices. From what we have shown here, to be effective, this challenge must occur at the regional, national and global level as much as the local. What must be conceded too is that this fight is an ideological one; one where empirical evidence may be necessary but not sufficient to demonstrate the social costs in not addressing the pathologies of social and economic Darwinism. To quote one writer, it is no good measuring the value of poetry “*in cubic metres and in kilograms of printed paper*” (Gramsci 1915/1975, p. 28). The problem of creating a new culture of respect—rather than indifference—is a broader cognitive-perspectival problem that requires an entire reassessment of our relational and valuational sensibilities (Hill 2007).

4 Concluding Remarks

Whilst it is clear from the Bangladesh Government’s endorsement of human rights legislation that there is a commitment towards “*inclusive education*,” as our paper has demonstrated, the success of achieving real movement towards this objective does not lie simply in attending to

the pragmatics of access opportunities alone. Systematic inclusion requires continuous reform at the ideological level. It involves disputing existing non-inclusive practices that range from applying a medical model of diagnosis and treatment to changing the entire nomenclature being used when speaking about impairment. Those attending the few “*special needs*” facilities in Bangladesh are not “*deficient*,” nor are they “*inmates*,” as the Senior Assistant Secretary to the Minister of Social Welfare, Md. Jahangir Hossain reports (Hossain 2010). Even if such labelling is indicative of poor English translation, the fact remains that the thinking behind such reports must be challenged and changed. At all levels of government, those presuming to act on behalf of the public must be well versed philosophically in the issues we have highlighted in our paper. They must be committed to deeper levels of change to enhance the quality of the day-to-day life of the disadvantaged—rather than doing nothing but manage a policy façade.

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Endnotes

1. Given that the World Health Organisation [WHO] recently upgraded its estimates for the number of people thought to suffer from a disability from 10%

to 15% of any given population (WHO 2011), 15% of 17 million children would suggest that a significant number of school-aged children are being excluded from even basic, entry-level education. At least 80% of disabled children live in low-income families.

2. Research conducted supports this conclusion. Kibria reported in 2005 that a mere 11% of children with disabilities—out of an estimated 90% with mild to moderate impairment—had gained access to education (DPE 2002). Another estimate from the Swedish branch of “*Save the Children*” was that only 2% of the total number of school-age children with disabilities were being catered for in Bangladesh.
3. Leading sponsors in this effort include organisations such as the Asian Development Bank (ADB), the Department for International Development (United Kingdom, DFID), the Australian Government Overseas Aid Programme (AusAID), the European Commission, the Swiss Agency for Development and Cooperation (SDC), and the US Agency for International Development (USAID).

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The Structure and Measures of Service Quality Perceptions: A Study of Hospitals in Bangladesh

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Abstract

This paper examines a complex multiple-encounter service environment—hospitals in a developing country—and suggests that service quality measures ought to be tied to *key actors' performance metrics (KAPMs)*. Based on face-to-face surveys of 400 hospital patients in Bangladesh and using structural equations modeling, our findings show that for multiple-encounter services, the three dimensions of service quality that emerged reflect key actors' performance. We also corroborate, as a validation of our model, that there is a positive link between service quality and satisfaction, as well as between satisfaction and loyalty, reflecting a mediating role of patient satisfaction.

1 Introduction

Research on health care quality and the quest to improve service performance has led to a plethora of studies in the past two decades (Pai and Chary 2013). According to (Veillard, Champagne, Klazinga, Kazandjian, Arah and Guisset 2005), the World Health Organization's Regional Office for Europe has been working with its 52 member states to design a comprehensive framework for hospital performance known as PATH (Performance Assessment Tool for quality improvement in Hospitals). The Organization for Economic Cooperation and Development (OECD) also initiated the Healthcare Quality Indicator (HCQI) project aimed at assessing the performance of primary care systems (Marshall, Klazinga, Leatherman, Hardy, Bergmann, Pisco, Mattke and Mainz 2006).

The introduction and development of the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) survey and its use in the healthcare industry in USA reflects the importance accorded to the quality metric as a standard for assessing consumers' experiences with a variety of services including Medicare and Medicaid (Lake, Kvam and Gold 2005). Similarly, the World Health Organization (WHO) created a health system performance metric based on five composite measures to survey public health experts, and not patients, on the assumption that the performance of a health system is too complex for the general public to understand. Blendon, Kim and Benson (2001), however, showed that for seventeen industrialized countries the ratings differed substantially when compared to the perceptions of their citizens.

In the marketing literature, the seminal articles of Parasuraman, Zeithaml and Berry (1985; 1988) offered a structure to the concept and measures of service quality. However, debates have raged about the dimensions and measures of this important construct, about whether contexts (industry) and type of services have any influence on service quality perceptions, whether service quality ought to be assessed at the encounter level or more generally, or how cultures influence and modify the effects of service quality (Cronin and Taylor 1992, Furrer, Liu and Sudharshan 2002, Teas 1993).

2 Research Objective

The creation of value, a fundamental goal of service providers, derives from different configurations of people, technology, processes, and information (Maglio and Spohrer 2008). However, the significance of “*people*” (e.g., employees) will generally remain the focal point of value creation that drives the other three components, directly or indirectly, to enhance a customer's total encounter experience. In certain service contexts, encounters with key actors can drive customer relationships and retention where “*each encounter tests the organization's ability to keep its promise*” (Bitner 1990).

This paper primarily addresses the conceptualization of service quality for multiple-encounter service situations where the service experience is shaped by multiple actors. Past research has stressed the importance of the service encounter (Bitner 1990, Bitner, Booms and Mohr 1994) during which the customer interacts with a firm's

representative. The quality of the encounter, reflected in the training, motivation, and attitudes of the employees can determine whether a customer will be satisfied and remain loyal. When a customer interacts not with one but several service providers, Bitner (1990) suggests that certain encounters may be more critical than others.

Given the importance of the service encounter, it is important to delve into the structure of the encounters, especially its key dimensions. We propose that service quality evaluation for multiple-encounter services would be tied to *key actors' performance metrics (KAPMs)* where the service quality dimensions would be closely linked to a set of specific actors. These dimensions depend on the complexity of the environment, the salience of the services sought, and the need to interact with a variety of service providers.

This study, therefore, intends to explore an alternative conceptualization of the service quality construct in multiple-encounter situations and identify the dimensions and measures. We selected the health care industry—hospitals specifically—for two reasons. Given its vital role in health preservation and contribution to sustainable overall socioeconomic advancement, the importance of the industry is enormous and needs little elaboration: the positive externalities of keeping a population healthy is important for any country. Secondly, this industry enables close examination of a complex service involving multiple encounters with a variety of actors in different categories (doctors, nurses, administration, support staff, etc.) whose performance may separately influence the service experience. By identifying the KAPMs important to service recipients, we attempt to advance our understanding of how service quality is evaluated for multiple-encounter services and how such assessment might be translated into better health service delivery.

An intriguing question that arises for hospitals, thus, is whether it would be better to use metrics tied to specific actors—doctors, nurses, support staff—or whether the use of global measures such as SERVQUAL with its five dimensions be a more appropriate metric or the appropriate metric (lumping all actors together) to assess service quality.

The departure of our study from typical service quality studies is to assess whether the measures and dimensions of service quality are different for multiple-encounter services when compared to single-encounter services. Studies in the marketing literature have adopted the SERVQUAL dimensions as the central set of constructs without giving sufficient consideration to the situation of multiple-encounter services. This study specifically addresses the following questions:

- Given the multiple encounters that patients experience with key actors in the hospital setting, should

the structure of perceived service quality (PSQ) and its measures be key-actor based: i.e., primary, secondary, and tertiary KAPMs? We will argue for this position subsequently.

- Secondly, we examine if there is a relationship between perceived service quality and satisfaction, as well as between satisfaction and loyalty, both relationships discussed extensively in the literature. The purpose of this part is to establish the predictive validity of the proposed structure and measures of service quality in a culturally and technologically different environment: Bangladesh.

3 Conceptual Framework

3.1 Service Quality

In the conceptual model developed by Parasuraman et al. (1985), consumers' service quality perceptions are influenced by a number of gaps, reflected in the difference between performance expectations and perceptions. Hence, service quality depends on the size and direction of the gap and will be favorable if the service performance exceeds the customer's expectations or unfavorable if service expectations are not met.

Although the SERVQUAL approach has made significant contributions to the service quality literature, scholars continue to debate the five dimensions of SERVQUAL and the measurement of service quality: as *perceptions* which more closely match customer evaluations of the services provided (Cronin and Taylor 1992) or as *disconfirmation*—the difference between perceptions and expectations (Parasuraman, Zeithaml and Berry 1994).

Support for the five dimensions has also been mixed. Differences in dimensionality have been explained by the different industries in which the studies were conducted (Asubonteng, McCleary and Swan 1996, Kettinger and Lee 1999). Some researchers argued that up to nine dimensions of service quality may exist depending on the type of service sector under investigation. Dotchin and Oakland (1994) had reservations about the five dimensions, arguing that the four service providers that were researched (retail banking, credit cards, brokerage, and repair & maintenance) were not high in consumer interaction, contact, and adaptation.

Criticism on the gap-score measure was also extensive (Babakus and Boller 1992, Cronin and Taylor 1992, Teas 1993), the main argument being that there is little theoretical support for the relevance of service expectations-performance gap as a basis for measuring service quality. Cronin and Taylor (1992) argued that the conceptualization and operationalization of SERVQUAL was inadequate and favored a simple performance-based measure of service quality, SERVPERF, which measures service

quality as an attitude using the five components and 22-items of SERVQUAL. The development of SERVPERF contributed to intense debate among researchers.

An alternative model to SERVQUAL was developed by Teas (1993), who argued that the disconfirmation model had conceptual, theoretical, and measurement problems. Teas suggested using alternative perceived-quality models, proposing a measure called Evaluated Performance (EP) which focuses on the gap between perceived performance and the *ideal point* on a feature instead of customers' expectations. He found empirical support that EP outperforms SERVQUAL with regard to validity. Similarly, Spreng, MacKenzie and Olshavsky (1996) examined gaps between performance and desire.

Given the varied points of view, (O'Reilly 2007) suggested the need to look at more context-specific approaches to understanding service quality. Since the participation of service users has become an increasingly important focus in quality improvement programs, they stress the importance of active participation of the consumer in defining and evaluating service quality. Embracing the P-C-P (pivotal-core-peripheral) model proposed by Philip and Hazlett (2001), they stress the need to let the relevant factors evolve from the user. According to O'Reilly (2007), the "[P-C-P] model does not provide ready-made questions for each of the attributes ... and ... encourages the service provider to develop the service evaluation tool" (O'Reilly 2007, p. 121).

In the multiple-encounter service environment of a hospital, especially in a different culture, it was felt that instead of using a pre-selected set of measures such as SERVQUAL, it would be important to let the evaluation criteria for perceived service quality emerge from the respondents. An apt system of breaking the complexity of hospital service down into meaningful categories for evaluation would appear to lie in the services provided by its key actors — primarily doctors, nurses and support service providers.

Using overall measures such as the five dimensions of SERVQUAL to evaluate a hospital's services may complicate information retrieval and attribution processes where multiple encounters are involved. For example, the nature and quality of the interaction with doctors may be very different from that provided by the nurses. Hence providing an overall assessment of any particular SERVQUAL "dimension" (e.g., responsiveness) in the hospital setting may be cognitively difficult for the patient to apportion. Similar encounters and experiences are also likely to be common to airlines, hotels, tourism, etc.

Based on patients' interactions and involvement with hospitals and their services, we felt that three categories of key actors in the hospital environment—primary, secondary and tertiary—would better enable patients to as-

sess service quality in the multiple-encounter setting. The primary actor is the doctor whose service is the main reason a patient goes to a hospital. The next level of the key actors involves the nurses who are expected to provide prompt and caring services, and moral strength. Finally, tertiary actors, also important in their own rights as value creators, involve interactions at other levels that enable a patient to function effectively and efficiently in that environment. Tertiary KAPMs may or may not involve direct interaction with service recipients (registration, food services, cleaners, etc.), hence their tertiary status.

3.2 Patient Satisfaction

Satisfaction with services is a desired outcome of service encounters. Many hospitals in the developed world have begun to realize the importance of patient satisfaction as a strategic variable and a crucial determinant of long-term viability and success. Di Paula, Long and Weiner (2002) suggest that in order to assess clinical practice effectiveness, hospitals have been trying to measure and predict patient satisfaction. Donabedian (1988, p. 1476) also suggested that "*patient satisfaction may be considered to be one of the desired outcomes of care. information about patient satisfaction should be as indispensable to assessments of quality as to the design and management of health care systems.*" To achieve patient satisfaction, Marley, Collier and Goldstein (2004) suggest that service providers (i.e., hospitals) must focus on both clinical and process quality improvements.

Research has also shown that service satisfactions can significantly enhance patients' quality of life (Dagger and Sweeney 2006) and enable service providers to better determine specific problems of customers to take corrective action (Oja, Kouri and Pakarinen 2006). Various studies have also shown a link between PSQ and satisfaction (Cronin and Taylor 1992, Parasuraman et al. 1988). Patient satisfaction is defined in (Oliver 1997) terms as the consumer's fulfillment response. It is a judgment that a product or service provides a pleasurable level of consumption-related fulfillment. In other words, it is the overall level of contentment with a service/product experience.

3.3 Loyalty

Scholars debate whether a customer who is satisfied with the quality of services will exhibit loyalty to the same provider. Szymanski and Henard (2001), in their meta-analysis, reported fifteen positive and statistically significant correlations between satisfaction and loyalty. Customer loyalty is generally considered a complex and multifaceted construct (Jacoby and Chestnut 1978) and most studies on loyalty conceptualize it as repeat-purchase behavior. Jacoby and Chestnut (1978) propose that loyalty is

repeat-purchase behavior based on belief acquisition, affect formation, and behavioral intention. Oliver (1999) enriched this framework by arguing that loyalty begins with repeated experiences, reinforced cognitions, and affective responses which leads consumers to develop motivation to rebuy and engage in brand-consonant behaviors.

Although there is no clear consensus with respect to the measurement of and relationship between the two constructs, satisfied customers would seem to have a higher usage level of service than those who are not satisfied (Bolton and Lemon 1999) and that they are more likely to possess stronger purchase intentions and recommend the product (Shankar, Smith and Rangaswamy 2003, Zeithaml, Berry and Parasuraman 1996). On the other hand, Caruana (2002) argued that customer satisfaction played a mediating role between service quality and loyalty. For multiple-encounter services, we test the notion, as confirmation, that satisfaction will co-vary with loyalty and that the effects of PSQ on loyalty will be mediated by satisfaction with services.

4 Research Design

4.1 Secondary Research

Some research, albeit limited, is now available in journal publications, government documents, and reports of international organizations on Bangladesh's health care system. However, patients' perceptions of health service quality and its links to satisfaction and loyalty have barely been examined. Most of the available studies use nominal variables (location, gender, and educational aspects of health service recipients). Given the overwhelmingly descriptive nature of most of the studies, where single-item scales dominate, secondary sources from other countries, thus, provided insights into the perceived service quality construct, its links to satisfaction and loyalty, as well as the controversies and challenges of conducting research on the topic. The different sources also led to the identification of a variety of research designs.

4.2 Qualitative Research

With the frame of reference being research findings in other countries, it was deemed essential to conduct qualitative research. The research team initially conducted in-depth discussions with ten patients about the process that patients go through to obtain the necessary care and their perceptions about the process. The framing question at this stage of the study was, "*How did you find the service and how did it affect your satisfaction with the hospital?*" The in-depth discussions pointed to a variety of elements in the service experience that depicted doctors' behaviors, attitudes of nurses, and treatment received from various

support staff members including gate-keepers, cleaners, registration staff, and bill payment staff. It is pertinent to note that an overwhelming majority of the patients' narratives involved two groups that were most important to them—doctors and nurses. Themes prominent in the SERVQUAL literature were also apparent, as discussed subsequently.

4.3 Measurement

There is no clear consensus among researchers regarding the conceptualization of service quality and its measurement. While most studies in the marketing literature begin with the 22-item set of measures (e.g., SERVQUAL, with minor adjustments), where respondents evaluate service quality on the chosen measures across contexts and countries, we felt that instead of using the pre-selected set of measures, it would be important to let the service evaluation criteria flow from the respondents following the P-C-P model of Philip and Hazlett (2001). In other words, we allowed the measures to evolve as dictated by the service recipients' experiences. While this approach does not ensure the use of comparable measurement instruments across countries, we felt that allowing this natural flow would be more meaningful, and provide a comprehensive and more relevant set of measures. In fact, Furrer et al. (2002) argued that the importance and perception of service quality are highly dependent on customers' values and beliefs which might vary from one culture to another.

The questionnaire used in this study included perceptual measures that were rated on five-point Likert scales. This design is consistent with prior studies on service quality, customer satisfaction, and loyalty. Each scale item was anchored at the numeral 1 with the verbal statement "*strongly disagree*" and at the numeral 5 with the verbal statement "*strongly agree*." Multiple items were used to measure each construct so that their measurement properties could be assessed for reliability and validity.

We did not use the gap score approach that measures the difference between perceptions and expectations as suggested by the original SERVQUAL framework because, according to Cronin and Taylor (1992), service quality can be predicted adequately by using perceptions alone. Teas (1993) also argued that measuring the gap between expectations and performance can be problematic. This approach is consistent with other studies (Andaleeb and Basu 1994).

4.4 Questionnaire Design

A preliminary questionnaire was developed in English, based on the qualitative research, but also informed by the service quality literature. The questionnaire was translated into Bangla and retranslated few times until it was

deemed user-friendly and appeared to reflect the domain of the issues pertinent to hospital service recipients. The questionnaire was also pre-tested to arrive at appropriate wording, format, length, and sequencing of the questions. Pre-test feedback was used to refine the questionnaire until it was ready for data collection. Respondents were provided reasons for the study, offered complete confidentiality guarantees, allowed the right of refusal to answer specific questions, and asked not to provide any contact information according to internationally accepted research protocol. The last section of the survey instrument contained questions on demographics to help classify the respondents on gender, age, and related variables.

4.5 Sampling Method

The population was defined as in-patients in public and private hospitals in Dhaka City, Bangladesh and a subset who had experienced services in a foreign country. Dhaka's hospitals were deemed appropriate as it hosts the largest number of hospitals of varying quality and attends to a diverse set of patient needs. Due to resource constraints, a total sample size of 400 was targeted.

Two separate lists of public and private hospitals in Dhaka, along with their bed capacities, were obtained from the Ministry of Health and Family Welfare (MOHFW), Government of Bangladesh. From the list, Dhaka Medical College and Mitford hospital were chosen purposively as these two public hospitals are reputed to handle patients from all economic classes and with various health problems. In addition, three hospitals were chosen from the list of private hospitals using simple random sampling. These include Central Hospital (bed capacity 80), Holy Family Hospital (bed capacity 330), and Monowara Hospital (bed capacity 35). 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 systematic random sampling, patients were selected keeping the targeted sample size in mind. The snowball method was used to reach those who had experiences with a foreign hospital as there is no list available for this category of patients. A total of 400 usable surveys were ultimately completed as planned.

4.6 Data Collection Method

A ten-member team of final year BBA students from a private university were recruited for data collection and trained rigorously to collect data in a professional manner. The use of university students was our best option because of their interest, enthusiasm, and level of education that made it easy to convey to them the importance of the study.

A letter from the Ministry of Health and Family Welfare was forwarded to the respective hospitals to extend necessary cooperation to the data collectors. This was important to lend authenticity to the study and to gain the confidence of the different hospitals. The researchers supervised the data collecting teams at the different hospitals and provided assistance with obtaining the list of patients to be released, as well as with data collection. Upon receipt of the list of patients to be released, the data collectors used the systematic random sampling procedure to select the respondents.

5 Analysis and Results

5.1 Measurement Model

Confirmatory factor analysis (CFA) was conducted to estimate the properties of the service quality construct (Figure 1). All constructs were evaluated for unidimensionality, reliability, and discriminant validity (Andaleeb and Basu 1994, Anderson and Gerbing 1988). The measurement model was estimated based on a covariance matrix using the maximum likelihood estimation method (Chou and Bentler 1996), which is the most commonly used approach in structural equation modeling (SEM). The multidimensionality and fit of the measurement model for each construct was tested using confirmatory factor analysis (CFA). The data were examined for outliers; there were none. Using measure purification, the number of scale items was reduced and retained (Joreskog and Sorbom 1988).

The correlation matrix shows that all correlation coefficients are significant at $p < 0.001$ level (Table 1). As indicated by the results of CFA (Table 2), all items had significant loadings on their corresponding constructs with significant t -values ($p < 0.001$), the lowest t -value being greater than 8.00. Moreover, all factor loadings were significant, indicating convergent validity (Anderson and Gerbing 1988). The model had a significant χ^2 (222.71, 116, $p < 0.001$), which was expected given the sensitivity of the testing procedure to the large data set. However, the measurement model provided a good fit to the data based on several indices used statistics (CFI = 0.97, GFI = 0.94, NFI = 0.94, and RMSEA = 0.048).

We then assessed validity measures for the measurement model. Construct validity is the extent to which a set of measured items actually reflect the theoretical latent construct they are designed to measure and is established via face, convergent, discriminant, and nomological validity. To assess convergent validity we checked the extent to which indicators of a specific construct "*con verge*" or share a high proportion of variance in common by examining construct loadings and average variance extracted (AVE). Table 3 shows that the standardized loadings es-

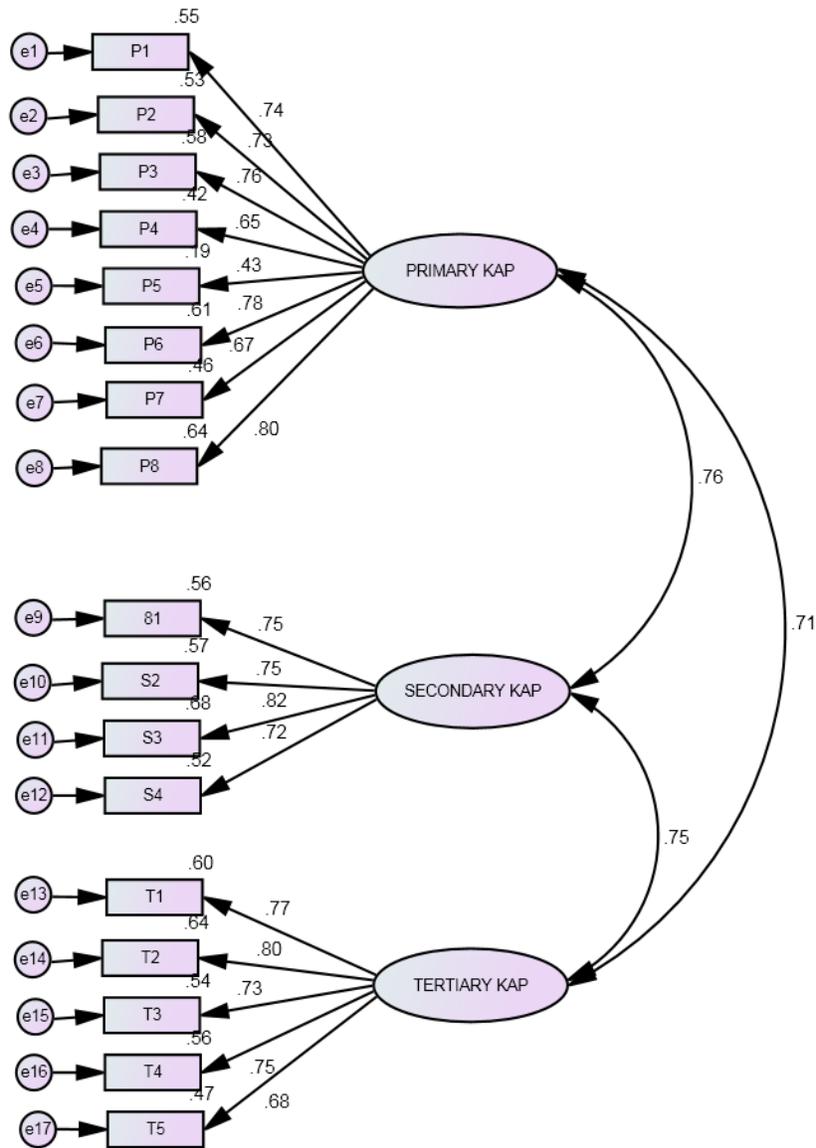


Figure 1: Confirmatory Factor Model

Table 1: Correlation Matrix for the Theoretical Constructs (Three Factors)

Constructs	(1)	(2)	(3)	(4)	
Primary KAP	(1)	—			
Secondary KAP	(2)	0.766	—		
Tertiary KAP	(3)	0.709	0.745	—	
Satisfaction	(4)	0.809	0.798	0.840	—
Loyalty	(5)	0.751	0.704	0.750	0.889

All correlations are significant at $p < 0.001$ level.

Table 2: The Results of Confirmatory Factor Analysis

Constructs/ Indicators	Standardized Coefficients	t-value	Squared Multiple Correlations
Primary KAP			
P1	0.742	15.111	0.550
P2	0.727	14.777	0.529
P3	0.761	—	0.579
P4	0.650	13.039	0.422
P5	0.431	8.397	0.186
P6	0.780	15.992	0.608
P7	0.675	13.588	0.455
P8	0.803	16.531	0.644
Secondary KAP			
S1	0.750	24.555	0.562
S2	0.753	24.175	0.568
S3	0.822	—	0.676
S4	0.721	—	0.520
Tertiary KAP			
T1	0.774	14.481	0.599
T2	0.802	15.347	0.643
T3	0.734	—	0.539
T4	0.749	14.350	0.561
T5	0.684	13.080	0.468

$\chi^2 = 222.71$ with $df=116$, $p=0.001$, $RMSEA=0.048$

imates are above 0.5 (with one exception), AVE estimates are 0.5 or above and all CR values are very close or above 0.70 indicating adequate convergence or internal consistency. Taken together, the evidence provides initial support for the convergent validity of the three construct KAPM measurement model. Although some loading estimates are below 0.7, they do not appear to affect model fit or internal consistency. In addition, the model fits relatively well based on the goodness of fit measures. Being a pioneering study of hospital service quality in the context of Bangladesh, the indicator items were retained while adequate evidence of convergent validity has been provided.

Discriminant validity is the extent to which a construct is truly distinct from other constructs. To estimate discriminant validity, we examine if the average variance extracted (AVE) estimates are greater than the corresponding squared inter-construct correlation estimates (SIC). Table 3 indicates the values needed to support discriminant validity. AVE for the Primary KAP is 49.7%. We would have preferred this value to be larger; however it is still considered acceptable. On the other hand, AVE estimates for the secondary and tertiary KAPs are above the corresponding SIC estimates. This means the indicators have more in common with the construct they are associated with than they have in common with other constructs. Therefore, the three-construct CFA model demonstrates

discriminant validity.

We then performed a second-order CFA for perceived service quality (PSQ). We found that three dimensions displayed in Figure 1 loaded significantly on the latent construct PSQ; the construct also indicated a good fit to the data ($\chi^2 = 222, 116, p < 0.001$, $CFI=0.97$, $GFI=0.94$, $NFI=0.94$, $RMSEA=0.048$). The variance of the second-order factor was fixed at 1, as suggested by Bentler (1992). The results of the second order model are shown in Table 4.

According to Loehlin (1998) a useful first step is to compare the χ^2 coefficient from the measurement model with the χ^2 value derived from the second-order model. If they do not differ significantly, it is an indication that the structural part of the original model is not contributing to substantial misfit relative to that produced by the measurement model. If the difference in the χ^2 value between the measurement model and the structural model is significant, it indicates that the structural part of the model contributes to substantial misfit and needs to be re-specified. The CFA of the measurement model resulted in a χ^2 (d.f.=116) value of 222, while the model including the measurement and the structural part achieves a χ^2 (d.f.=116) value of 222. The findings indicate that the addition of the structural part did not introduce noise or was not contributing to model misfit. The scales reflected reasonable reliabil-

Table 3: Three Factor Completely Standardized Factor Loadings, Variance Extracted, and Reliability Estimates

Items	Primary KAP	Secondary KAP	Tertiary KAP	Item Reliabilities	Eigen values	Delta	IC	SIC
P1	0.742	—	—	0.55	—	0.45	—	—
P2	0.727	—	—	0.53	—	0.47	—	—
P3	0.761	—	—	0.58	—	0.42	—	—
P4	0.650	—	—	0.42	—	0.58	—	—
P5	0.431	—	—	0.19	—	0.81	—	—
P6	0.780	—	—	0.61	—	0.39	—	—
P7	0.675	—	—	0.46	—	0.54	—	—
PS	0.803	—	—	0.64	3.975	0.36	0.76	0.57
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S1	—	0.750	—	0.56	—	0.44	—	—
S2	—	0.753	—	0.57	—	0.43	—	—
S3	—	0.822	—	0.68	—	0.32	—	—
S4	—	0.721	—	0.52	2.325	0.48	0.74	0.54
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T1	—	—	0.774	0.60	—	0.40	—	—
T2	—	—	0.802	0.64	—	0.36	—	—
T3	—	—	0.734	0.54	—	0.46	—	—
T4	—	—	0.749	0.56	—	0.44	—	—
T5	—	—	0.684	0.47	2.810	0.53	0.71	0.50
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AVE	49.69%	58.13%	56.20%	—	—	—	—	—
CR	0.66	0.77	0.75	—	—	—	—	—
SIC Estimates	0.57–0.50	0.57–0.54	0.54–0.50	—	—	—	—	—

IC=Interconstruct correlations; SIC=Squared Interconstruct Correlations; Delta=Standardized Error Variance; AVE=Average Variance Extracted; CR=Construct Reliabilities.

Table 4: The Results of Second-Order CFA

Structural Paths	Standardized coefficients	<i>t</i> -value	Squared multiple correlations
PSQ → Primary KAP	0.854	14.321	0.792
PSQ → Secondary KAP	0.895	15.922	0.802
PSQ → Tertiary KAP	0.834	13.434	0.696

$$\chi^2 = 222.71 \text{ with } df=116, p=0.001, \text{RMSEA}=0.048$$

ity based on Cronbach's alpha coefficients (see Table 5, which also lists the items retained in the model). These results indicate that the scales had adequate measurement properties and were appropriate for further analyses.

Figure 2 represents the structural model used to test the hypothesized relationships and Table 6 indicates the hypothesis test (path coefficients) results. These results show a clearer picture of the three KAPMs reflecting discerning cognitive processes when evaluating service quality. All ratios are significant as they are much above the minimum (1.96) and with the expected signs. The standardized total effects of each latent variable on patient loyalty support the hypothesized relationships. When we analyze the squared multiple correlations (*r*-square) in Table 6, we find that PSQ explains 91% of satisfaction and,

through the intermediation of satisfaction, explains 80% of patient loyalty.

6 Discussion and Conclusions

The service quality debate has led to differing views on the measures and dimensions of service quality (Ladhari 2008). These disagreements often originate from the different types of measures used, services studied, cultural contexts, and the extent of customer interface they involve. Interestingly, the literature does not seem to parse specifically the issue of complex, multifaceted, and multiple-encounter services (Smith 2000). Rather, researchers have generally applied a given set of scales to both simple and complex service environments. Our anal-

Table 5: Items Retained in the Final Model

Dimension/ Statements	Cronbach Alpha
<i>Primary KAP</i>	0.838
Doctors were consistently caring (P1)	
Doctors correctly referred to your previous problems (P2)	
Doctors followed up treatments regularly (P3)	
Doctors had professional appearance (P4)	
Doctors did not suggest any unnecessary lab tests (P5)	
Doctors gave knowledgeable answers to questions (P6)	
Doctors explained treatments and provided advice clearly (P7)	
Doctors' advice was administered properly (P8)	
<i>Secondary KAP</i>	0.861
Nurses gave correct answers to your questions (S1)	
Nurses communicated patient's needs to doctors (S2)	
Nurses were consistently caring (S3)	
Nurses gave moral encouragement to patients (S4)	
<i>Tertiary KAP</i>	0.805
Hospital was visually appealing (T1)	
Hospital premises were neat and clean (T2)	
Hospital had modern equipment (T3)	
Cabin/ward's waste bins were regularly cleaned (T4)	
Toilets and bathrooms were clean (T5)	
<i>Satisfaction</i>	0.894
The service quality I experienced was excellent (SAT1)	
My expectations were met by the hospital (SAT2)	
Overall, I was satisfied with the hospital visit (SAT3)	
<i>Loyalty</i>	0.923
I would not return to this hospital (LTY1)	
I would recommend this hospital to others (LTY2)	

Table 6: Structural Model Results (Path Coefficients /Standardized Regression Weights)

Structural Paths	Standardized Coefficients	t-value*	Squared Multiple Correlations
Components of PSQ			
PSQ → Primary KAP	0.856	15.058	0.733
PSQ → Secondary KAP	0.852	15.756	0.727
PSQ → Tertiary KAP	0.870	14.166	0.756
PSQ → Satisfaction	0.953	21.246	0.908
Satisfaction → Loyalty	0.892	24.323	0.796

$\chi^2=437.33$ with $df=204$, $p=0.001$, $RMSEA=0.054$, $GFI=0.91$, $CFI=0.96$.

*All values are significant at $p < 0.001$. Check the χ^2 value.

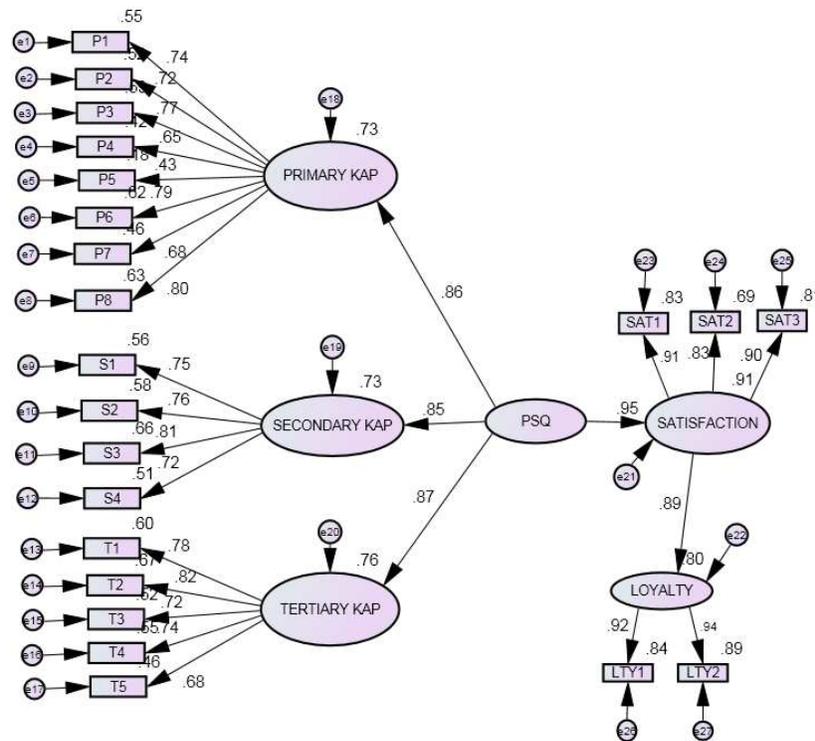


Figure 2: Structural Model of PSQ, Satisfaction and Loyalty

ysis suggests that the set of measures such as SERVQUAL to evaluate complex and multiple encounter services (such as in hospitals) may need to be re-assessed, especially because of the multiple sets of key actors (i.e., doctors, nurses, and support staff) one encounters and evaluates in a complex setting. Thus, service quality measures ought to be tied to *key actors' performance metrics or KAPMs*.

In fact, emerging research in health care has led to the CAHPS@survey that identifies a number of dimensions important to patient satisfaction (Goldstein, Farquhar, Crofton, Darby and Garfinkel 2005): communication with doctors, communication with nurses, responsiveness of hospital staff, cleanliness and noise level of the physical environment, pain control, communication about medicines, and discharge information. This stream of research seems to be consistent with the KAPM approach for measuring service quality in multiple-encounter settings, whereas SERVPERF may be more appropriate for single encounter services (banks, retail, haircuts, etc.) where the interface is usually with a single dominant and key actor.

Based on our findings, we feel that three categories of actors in the hospital environment—primary, secondary and tertiary—would better enable patients to assess service quality in the multiple-encounter setting. The primary actor is the doctor whose service is the main rea-

son a patient goes to a hospital. From the doctor, the patient expects a professional demeanor, knowledgeable answers regarding tests, diagnoses, and treatments (i.e., assurance) and a human or personal touch, reflecting how comfortable they were made to feel, compassion, etc. The next level of the key actors involves the nurses who are expected to provide caring services, communicating patients' needs to the doctor, and providing psychological support. Nurses also play a vital role as patient advocates by providing explanations and helping deal with pain, fear, anxiety, etc. The tertiary actors, also important in their own rights as value creators, enable patients to function better in the hospital environment. However, their role may or may not involve direct interaction with service recipients (registration, food services, décor, cleanliness), hence their tertiary status. Also, because of the diverse set of such service providers, they are likely to be lumped together not so much as key actors by name but in terms of the outcomes they produce (efficient paperwork, cleanliness, appearance, etc.). There may also be some overlap in the KAPMs (doctors' appearance as a tertiary factor), given that the notion of clearly specified boundaries of a category with a specific set of defining characteristics may not exist (Nisbett and Ross 1980).

Interestingly, we found a discernible link between the KAPM and SERVQUAL measures: in multiple encounters, specific dimensions of SERVQUAL such as assur-

ance, reliability and empathy seem to be attributed to certain key actors, e.g., *primary KAPMs*, while responsiveness and empathy are attributed to *secondary KAPMs*. Similarly, the tangibles dimension was reflected for the *tertiary KAPMs*.

SERVQUAL occupies an important place in service quality evaluations. However, for multiple encounter situations our study shows that specific aspects of SERVQUAL are best reflected in different key actors. In that, our study does not refute SERVQUAL but reframes it, showing how specific dimensions of SERVQUAL are tied to different key actors. Such reframing, however, may vary for different industries, suggesting the need for additional studies along this line of inquiry. For example, in the air travel industry, there may be several key actors; customers expect different aspects of service from each key actor. Lumping ticketing agents, security workers, customs officials, air crew, and baggage handlers to assess overall service experiences may not be very meaningful.

7 Future Research

The KAPM approach ought to be applied to other types of multiple-encounter services to see if there is general support for the “*key actor*” perspective. The measures/dimensions of SERVPERF representing key actors may, however, vary from one industry to another. The number of categories of key actors may also differ from one industry to another. This conjecture provides strong justification for conducting similar studies in other multiple-encounter service environments and in countries that are culturally different.

Second, hospitals are complex environments and explaining patient satisfaction in these circumstances is very complicated. Thus, while we mainly focus on the encounter, it must be acknowledged that other non-encounter or indirect interaction factors may also drive satisfaction. For example, keeping the premises clean involves behind-the-scene actors who may or may not be overtly recognized or named by the service recipient. But that does not diminish their contribution; it merely establishes their relative importance to the service seeker.

Importantly, what our study establishes is that if patients perceive hospital service encounter experiences in terms of key actors, this can provide meaningful and useful managerial information in shaping human resource and internal marketing strategies. For example the doctors are the *primary actors* whose offerings are the core product that patients purchase. In this encounter, the patient expects a professional demeanor, knowledgeable answers regarding tests, diagnoses, and treatments (i.e., assurance), and a compassionate human or personal touch to make them feel comfortable. Thus, doctors need

to combine their training in medicine with that of customer service to effectively handle the provider-patient encounter. Primary actors need knowledge and skills about patient psychology, negotiation, handling difficult patients, and, importantly, “*putting the customer first.*” Sensitivity training on such matters could be provided through in-house or external organizations such as universities or professional organizations. The *secondary actors* are the nurses who have more frequent contact with the patients. In their close relationships with patients they need to be perceived as “*patient advocates.*” Effective advocacy begins with honesty and trust. All marketing promotions, in fact, should actively emphasize this objective. They are the helping hand and they need to be well-trained in dealing with patients’ fears, concerns, and anxieties and help patients set the right expectations; i.e., reduce unrealistic expectations. The *tertiary actors* in their support role also ought to be integrated into becoming vital part of the service provided. Marketing campaigns should emphasize improvements in these factors could be used to differentiate the hospital’s services from the competitors.

This study examined the structure and measures of perceived service quality in a multiple-encounter context, namely hospital care, in a developed country. Our results represent an incremental contribution to the service quality literature, particularly from a structural and measurement perspective, suggesting the need to consider the key actor approach when measuring service quality for multiple-encounter services.

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The Performance and Challenges of Public-Private Partnership (PPP) Projects in Bangladesh

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Abstract

Like many other countries, Public-Private Partnership (PPP) has been appreciated as an important way out for infrastructure development in Bangladesh. Though there have been recent successes in institutional and regulatory framework, other critical issues like transaction expertise and PPP financing facilities are yet to be boosted in the country. There also needs to be a strong incentive for the executing agencies that will bring more bankable PPP projects for the private sector. So far, around 40 private sector infrastructure projects have been completed in Bangladesh with a total investment value of US\$ 2.93 billion, and around 40 additional projects are in the national pipeline. Many PPP projects that were awarded earlier are not performing well due to weaknesses in transaction processes. Under the circumstances, it is essential to evaluate the effectiveness of the existing PPP project framework in Bangladesh. This paper analyzes selected PPP projects in Bangladesh to draw lessons in view of the institutional, regulatory, project financing, and other policy relevant issues. The paper specially focuses on upfront project development constraints and corresponding solutions for creating a greater PPP-enabled environment in the country.

1 Introduction

Infrastructure is the key for sustained economic growth. The high transaction costs arising from inadequate infrastructure can limit the growth potential of an economy regardless of its progress in other areas. However with significant initial investment requirements, infrastructural development is a challenging task for the government. For emerging economies constrained with low tax GDP ratio, it is even more difficult to ensure long term project financing and implement capital intensive infrastructure projects. As governments may not be able to invest a large amount at a time only for the infrastructure sector, countries are increasingly turning towards the private sector for infrastructure development (Alam and Rashed 2011a). Therefore private participation in infrastructure is increasingly receiving importance for the provision of infrastructure and utility services around the world (Alexander 2002). However, governments still need to play a key role in terms of PPP project development and transaction, so it cannot be left completely to the private sector (Alam and Rashed 2011b).

Worldwide, Public Private Partnership (PPP) projects are becoming popular as an innovative approach for the development of infrastructure with the involvement of private sector (Rashed, Alam and Mohd. Ekhwan 2011).

PPPs have gained utmost attention from the public sector and donor groups particularly in terms of service quality, procurement efficiency, risk minimization and the ability to combine adequate managerial and technical capabilities. The concept of PPP though not relatively new, has not been yet fully developed and defined (World Bank 2007, p. 1). According to Asian Development Bank, PPP is a range of possible relationships among public and private entities in the context of infrastructure and other services that present a framework for engaging private sector and also structure the role of governments in ensuring that social obligations are met (ADB 2008, p. 55).

Generally, a public infrastructure project is financed, owned and operated by government authorities or utilities. However, in a private infrastructure project or a PPP project, development, financing, procurement, construction and operation are carried out through a private investor through schemes such as build-operate-transfer (BOT), build-own-operate (BOO), etc. In reality, a PPP project is not only a project, but a business for a long period of time to be carried out by a private investor through partnerships between government and a private firm to provide services formerly supplied by the government alone (UNESCAP 2005, p. 30). Similar types of experiences are also observed by researchers. Engel, Fischer and Galetovic (2007) describe the circumstances un-

der which PPPs may provide better value than traditional public procurement programs. The study also describes institutional requirements for a successful PPP program. Fischer (2011) uses the experience of Chile and other developing countries to examine the benefits and pitfalls of PPPs, and also offers recommendations to address common problems.

Developing countries have received more than US \$680 billion of investment in private infrastructure projects between 1990 and 2000 (Brook and Smith 2001, p. 6), when 130 developing countries had infrastructure projects with private participation, and their governments transferred the operating or construction risk, or both, to the private sector for more than 2,300 infrastructure projects and attracted investment commitments of almost US \$690 billion (World Bank 2002). Gassner, Popov and Pushak (2008) carried out a comprehensive econometric analysis of more than 1,200 utilities in 71 developing and transition countries. The study found that private sector participation improved efficiency and service levels. Marin (2009) also carried out a similar study by reviewing the experience of 65 PPPs in the water sector in developing countries, finding consistent improvements in efficiency and service quality.

At the same time, researchers also identified several issues crucial for success of PPP projects. Rashed et al. (2011) noted that in a PPP project, though the investment comes from the private sector, government has the prime role of upfront project development particularly project identification and feasibility study in order to determine the financial and economic viability of a business venture with broad functional specification on technical matters and commercial aspects. The feasibility study identifies the risks and the regulatory and monitoring framework. It is the most important tool to identify any possible problems that might occur during project implementation in order to make the project transparent to the potential private investors in terms of risk involvement, goods/service demand and future growth of the business.

Guasch (2004) describes in detail how poor PPP design and weak implementation can lead to renegotiations and increased costs. Farquharson and Yescombe (2011) describes how to develop and implement a PPP successfully, by developing a marketable project and attracting the right private partners. (UNECE 2008) provides a detailed direction on how to improve governance for PPP programs. The study also provides insight into the key challenges and possible frameworks for implementation. Along with policy support successful implementation of PPP projects requires institutional development and financial market development. Regan (2012) provides a comprehensive assessment of the effectiveness of PPP units in developed and developing countries and offers lessons on

the context in which PPP units have been most effective. Farrugia, Reynolds and Orr (2008) highlight the example of PPP units with a focus on experiences of developed countries.

Following many developing countries, Bangladesh also successfully implemented projects under PPP models to solve its infrastructure problem. So far, a total of 41 PPP projects have been completed in Bangladesh with a total investment value of US \$2.93 billion; currently another 40 projects are in the national PPP pipeline. In Bangladesh, PPPs have been most successful in the power generation sector in terms of legal and regulatory framework, transparent procurement process, efficient off-take guarantee and creation of specific units like the PPP Office, the Power Cell, etc. However, PPP success in the power sector also needs to be replicated in other sectors like road and social infrastructure sector. It is a paradox that PPP project development and especially successful implementation in these sectors has not been able to keep pace with the growing demand. Under the circumstances, it is essential to evaluate the effectiveness and problems of PPP in the country. At the same time, addressing the challenges is also essential for policy makers to deal with the issue in the best possible way. This paper identifies the existing gaps in roles and procedures of various parties involved in PPP project development and aims to propose long, short and medium term strategies.

2 Overview of PPP Projects in Bangladesh

PPP development in Bangladesh can be divided into three phases. First generation PPP projects started with independent power producers (IPPs) after the government approved the 1996 private sector power generation policy. The second generation PPPs were carried out in multiple sectors after the government approved (BPSIG 2004). The third generation PPPs have been enriched further as the government approved the PPP budget in 2009. The third generation PPP policy framework and guidelines have been approved by the government in June 2010.

The Government of Bangladesh (GoB) has shown its strong commitment to PPP by allocating a PPP budget that is separated from the traditional development and revenue budget. In the 2009–2010 fiscal year, US \$360 million has been allocated under this PPP budget. The budget has been segregated under three heads — \$300m for loan or equity, \$45m for viability gap funding (VGF) and \$15m as a centralized technical assistance fund. In addition, the government has issued a position paper titled, “*Invigorating Investment Initiative through Public-Private Partnerships*,” in June 2010.

Table 1: Sector Wise PPP Projects Implemented in Bangladesh.

Sector	Project ^a Name	Capacity	Investment (USD\$ million)
Power Sector			
	CDC Meghnaghat Ltd.	450 MW	300
	CDC Haripur Ltd.	360 MW	183
	Khulna Power Company Limited	110 MW	110
	Haripur EI Paso Barge Mounted Power Plant	115 MW	115
	Westmont Baghabari Power Barge	130 MW	16.2
	BEPZA Power Plant at CEPZ	40 MW	28
	BEPZA Power Plant at DEPZ	35 MW	23
	Power Plant at Savar	44 MW	30
	Power Plant at Narsingdi	35 MW	23
	Power Plant at Comilla	25 MW	17
	Small Power Plants (10 to 33 MW) — 12 stations	230 MW	115
	Captive Power Generation (many plants)	1200 MW	500
Telecom Sector			
	Banglalink	34	123
	GrameenPhone	448	500
	Pacific Bangladesh Telecom Limited	65	118
	TM International (Bangladesh) Ltd.	25	366
	Warid Telecom	—	—
	Bangladesh Rural Telephone Network	123	150.4
	Public Switched Telephone Network (PSTN) (Fixed Line Providers)	Many	172.5
	PGCB's Optic Fiber Cable (Phase-I) (Dhk-Ctg)	STM 64	1.2
	PGCB's Optic Fiber Cable (Phase-II) (Ctg-Cox'bZR)	—	11
	License for International Gateway Services	—	—
	License for Interconnection Exchange (ICX) Services	—	—
	License for International Internet Gateway Services	—	—
Port Sector			
	Land Port at Sonamasjid	—	2.2
	Land Port at Banglabandha	—	1.0
	Land Port at Hili	—	2.2
	Land Port at Birol	—	0.71
	Land Port at Bibirbazar	—	0.71
	Land Port at Teknaf	—	4.0
Roads Sector			
	Gulistan-Jatrabari Flyover (Toll Road from Gulistan to Jatrabari)	7 km	108
	Dhaka Elevated Expressway	—	—
	Jamuna Bridge toll management contract	5	—
	Shah Amanat International Airport	1	—

^aThis list covers mostly projects under the previous PPP institutional and regulatory structure as adopted in 2004.

In the power sector, after the approval of the 1996 Private Sector Power Generation Policy, a large number of IPP projects have been taken up and completed in Bangladesh. Notable amongst them are the 360MW Haripur and 450MW Meghnaghat combined cycle power plants. At the moment, about 25 IPPs have been either completed or are in varying stages of completion, representing an investment of almost \$1 billion. IPPs currently supply about one-third of the electricity used in Bangladesh.

In the telecom sector, private investments approach the \$1.5 billion mark, with world-class mobile companies such as Grameenphone, Banglalink, Aktel, Citycell, and Warid. Fixed line phones have also been opened up and many operators such as RanksTel, Dhaka Phone, OneTel etc are giving commercial service. The Power Grid Co. has leased out its Dhaka-Cox's Bazaar optic fiber cable constructed on its high-voltage transmission lines. The Bangladesh Railway has done the same for the optic fiber along its railway lines, leasing it with a PPP.

In the ports sector, six land ports have been constructed through PPP, located in Sonamasjid, Banglabandha, Hili, Birol, Bibirbazar and Teknaf. These are the first BOT land ports in the world. The tendering process for private operators is currently underway for the New Mooring Container Terminal at the Port of Chittagong.

3 PPP Project Development Phases and Regulatory Framework in Bangladesh

In 1996, Government of Bangladesh issued the private sector power generation policy to facilitate public private partnerships (PPP). Later, Bangladesh Private Sector Infrastructure Guidelines (BPSIG) 2004 and Private Sector Power Generation Policy (PSPGP) 1996 (revised 2004) have been the major guiding instruments especially to facilitate private investors for PPP projects. The Public Procurement Act (PPA) was enacted by the national parliament in 2006. This act incorporated concessions agreement related provisions and extended the government's legal jurisdiction to formulate independent PPP guidelines. Policy and strategy for public-private partnership (PPP policy) was adopted in 2010.

Along with regulatory certainty, PPP projects need several consents and approvals including environmental clearance. Department of Environment (DOE) under Ministry of Environment and Forest is the approving authority for environmental clearance in Bangladesh. The Environmental Conservation Act 1995 (and amendment 2000) and the Environmental Conservation Rules 1997 are the guiding instruments for projects to get environ-

mental approval from DOE. The World Bank guidelines are generally followed for environment impact assessment (EIA), social impact assessment (SIA), rehabilitation action plan (RAP), social action plan (SAP), environment management plan (EMP) etc. for maintaining "Equator Principles" which facilitate PPP projects in getting finance from banks. Other relevant policies and laws in conducting PPP business in Bangladesh include:

- The Foreign Exchange Regulation Act, 1947
- Foreign Private Investment (promotion and protection) Act 1980
- The Income Tax Ordinance, 1984
- Acquisition and Requisition of Immovable Property Ordinance, 1982
- Investment Board Act, 1989
- The Companies Act, 1994
- Industrial Policy 1999
- Arbitration Act, 2001

The life cycle of PPP projects in general may be segregated into seven phases in terms of role played by the agencies involved in these projects. In different phases the sector agencies have different roles. The PPP project phases are given in Table 2.

4 Selected Case Studies of PPP Projects in Bangladesh

This section depicts selected case studies of PPP projects in Bangladesh which were implemented before adoption of existing institutional and regulatory structure.

4.1 Case Study on AES Meghnaghat 450MW Power Plant

The AES Meghnaghat 450MW Power Plant project was handled directly by Bangladesh Power Development Board (BPDB). Six parties were pre-qualified to compete and five of them submitted tenders. The quoted levelised tariff of different bidders ranged from 2.79 to 3.98 US cents/*kWh*. A project agreement was signed in mid-1999 with AES (Applied Energy Services) Meghnaghat, the bidder quoting the lowest tariff. The concession was a wholesale concession with BPDB being the only customer. GoB has given a payment guarantee on behalf of BPDB and a performance guarantee on gas supply through Titas. Financial closure was reached in April 2001. The commercial operation date was planned as 30 months after the financial closure date. During bidding AES also committed to supply BPDB about 1.4 billion *kWh* of free electricity worth US \$34.75 million, equivalent to five months of full-load production.

The relevant project implementation problem areas are as follows:

Table 2: Major Steps of PPP Project Development in Bangladesh.

Stage	Action
Stage I: Pre-Development	<ul style="list-style-type: none"> • Project idea and conceptualization • Identification and assessment meetings and discussions within the agencies
Stage II: Feasibility	<ul style="list-style-type: none"> • Agency engages consultants • Elicit project ideas • Define the need • Identify and agree on major technical and transaction parameters • Complete feasibility study
Stage III: Commercial Framework and Procurement	<ul style="list-style-type: none"> • Develop action plan • Prepare commercial framework • Obtain Ministry agreement for Pre-qualification • Obtain Expressions of Interest and shortlist • Prepare draft agreements • Prepare bid documents
Stage IV: Evaluation	<ul style="list-style-type: none"> • Hold bidders conference • Shortlisted bidders prepare bids • Agency receives bids and prepares evaluation report • Approval of successful bidder • Issue LOI to successful bidder
Stage V: Negotiation & Agreement	<ul style="list-style-type: none"> • Prepare for negotiations • Carry out negotiations with sponsor • Signing of agreement
Stage VI: Financing	<ul style="list-style-type: none"> • Sponsor makes Loan Applications to commercial lenders • Commercial lenders perform due diligence • Renegotiations for Lenders Requirements • Loan documents prepared • Financial closure
Stage VII: Construction	<ul style="list-style-type: none"> • Carry out Contract Administration functions • Oversee construction by lenders' engineer • Conduct satisfactory completion tests • Commercial Operations Date

- Only one-third of the total land was handed over to AES and the site hand-over was delayed by eight months.
- In mid 2000 (during the construction phase), EPC contractor Hyundai faced significant liquidity problems. Lenders became doubtful if Hyundai could do the project as stipulated. The lenders compounded Hyundai's problems by insisting on a performance guarantee from Hyundai six months before the due date.
- Due to inappropriate design of foundations, the cooling water intake structure settled in January 2002. There were serious vibration problems. Remedial actions must await settlement to finish. An issue like this affects the sponsor (because of delay in generation of power and consequent delay in revenues) and the overall power supply.

The project was successfully established and is currently running very well and is being considered as one of the most successful IPPs in Bangladesh.

4.2 Case Study on Construction of Dhaka Chittagong National Highway

The Dhaka Chittagong Highway (DCH) is the country's main transport corridor; it connects Chittagong, the port city southeast of Dhaka, and further up to the Jamuna Bridge linking the eastern and western parts of the country. The DCH was built with two lanes for most of its stretches and currently is unable to handle the high level of traffic. The government decided to expand the DCH to a dual two-lane carriageway to accommodate the current level and expected high growth of traffic on the DCH. The upgrading work constitutes the building of an additional two lanes alongside the existing 300 km long highway.

The relevant project implementation problem is that the project has been stalled due to the unavailability of the required Technical Assistance funds for the upfront project development activities. The Asian Development Bank has recently taken up this project and is planning to take it forward.

4.3 Case Study on Development of Sonamasjid Land Port

The GoB decided to operate the existing Benapole land port directly in the public sector and the remaining twelve land ports would be developed and operated through private sector on a build-operate-transfer (BOT) basis for a period of 25 years from the commercial operations date. For the first time, government termed thirteen land customs (LC) stations as "*Land Ports.*" Twelve land ports

were declared by gazette notification on 12 January 2002 and Bibirbazar was notified on 18 November 2002.

The relevant project implementation problem is that the investor quoted a very high amount of royalty in the bid, which was 49% of the gross revenue earned from the port. The difference between the quoted royalties with the other contenders was significantly high and unrealistic. IDCOL as the lead financier did not properly model the cash flows with a 49% offer. It also disbursed a significant portion of the loan in the project without proper monitoring of the construction progress. In spite of having received a large amount of money from IDCOL and other banks, the expected project work was not completed up to the required level and the whole project turned out less than satisfactory.

4.4 Case Study on Khanpur Inland Container Terminal Project

The concept of inland container terminal project was very new among other PPP infrastructure projects. Considering the containerized traffic volume inside the country, this project was unique. Transportation by barge is cheaper than road and rail and accordingly an inland container terminal at Khanpur on the river Sitalakhya in Narayanganj, about 34 km downstream from Dhaka, was proposed as a suitable location for setting up an inland container terminal. The project would provide a water alternative for the transportation of containers. Such a terminal might also be useful in connecting with Mongla and other major river ports. The proposed project was supposed to be developed in BOT basis with a 30-year concession period.

The relevant project implementation problems are as follows:

- The public sector officials did not have a clear understanding about the procurement process of such private sector infrastructure projects.
- Delay in decision-making by the Procuring Agency led to investors losing interest in the project.

5 Problems of PPP Project Implementation in Bangladesh

By its very nature, a PPP project is very different from a conventional public sector project as it can only be realized through a complex contract. It is essentially a business for a lengthy period of time and not a short-term construction project. This contract is extremely vital for the business relationship between the public sector and the private sector. Clauses in the contract might entice private investors or potentially drive them away.

The PPP projects require consultancy skills from local and foreign consultants. However, often consultants fail to understand the local context while developing PPP projects. Lack of consultants' skills can be related to consultants' inexperience with public sector projects and for overseas consultants, their inability to design projects that are appropriate for the resource-poor developing countries (the overdesign risk). To achieve sustainable growth via infrastructure development, these kinds of major obstacles have to be eradicated by introducing hassle-free mechanism with proper consulting guidance from experienced consultants in related fields

Infrastructure projects, from the funding viewpoint, have two components — Technical Assistance (TA) fund and investment fund. TA fund is basically used for compensating technical advisors or the consultants and investment fund is used for implementing the project on the ground. For a public infrastructure project, the TA fund and investment fund are found compositely while for a private infrastructure project (PPP), these two funds are separated — public sector deals with TA fund for technical advisors, linked projects, VGF and annuity payments etc. and private sector brings up the investment fund for financing the project. Problems that can be found in the real scenario is that as these two components are separated for PPP projects, the amount of fund becomes very small and fund dissemination process falls sometimes in an inert situation and it slows down the pace of implementation. In conducting feasibility study of the project, fund for consultancy services is needed. Moreover, investment promotion, draft agreements preparation, conducting the tendering process, evaluation of bids, and negotiation with the winning bidder along with finalization of the agreements need technical, commercial and legal advisory/consultancy services. Recently the government has adopted PPP budgets provisioning fund for TA and VGF which significantly resolves the fund constraints in project development, which earlier was one of the most critical problems for PPP implementation in Bangladesh.

Previously there was no prescribed manual to follow to conduct feasibility study and project transaction. Different projects were implemented using different factors and parameters. The agreements of all PPP projects need to be consistent in order to meet some common objectives. However, recently the PPP Office has taken significant steps to develop a uniform process for PPP project development and transaction. The PPP office has already published model concession agreements and prepared manuals for port, mass rapid transit, industrial park, etc. Along with addressing the issue of feasibility studies, it is also important to ensure proper budgetary allocation for carrying out feasibility studies and other associated activities. The government obligations in PPP projects are often limited to the feasibility study, transaction support and im-

plementing linked government or public sector projects which subsequently provide the basis for the fund to be mobilized by the government for these services as upfront development.

In addition, while implementing the PPP project, timely completion of associated/linked projects as specified in the contract is primarily the public sector's obligations. These are very crucial to make the PPP project successful. Under PPP Policy and Strategy 2010, Section 9, there is a provision for initiating linked components and arranging finance for such components. Depending on the nature of the PPP project, the line ministry/implementing agency may consider financing and implementing linked services, construction of approach roads, etc. The linked projects through Development Project Pro-forma (DPP) are to be included in the Annual Development Plan (ADP) using the existing procedures for initiating and formulating development projects. However, it should be noted that delays in getting DPP approval should not hamper/ delay the main PPP initiative. Infrastructure projects in Bangladesh often suffer from delays and cost overruns. Delays and cost overruns have significant implications from economic as well as political point of view. Due to delays in project implementation, the people and the economy have to wait for the provisions of public goods and services longer than necessary. Thus, delays limit the growth potential of the economy. Similarly, cost overruns reduce competitiveness of the economy. To address these issues, PPP project implementation process can be coordinated by a central authority like the PPP Office. Recognizing this issue, Government of Bangladesh has established the PPP Office under the Prime Minister's office to coordinate overall PPP project development and transaction process.

One of the key constraints is the domestic capacity for financing infrastructure PPP projects by the local commercial banks. Currently Bangladesh Bank imposes Single Borrower Exposure Limits capping exposure to the companies seeking finance, making a theoretical maximum syndication, if all the private commercial banks participated, of US \$600 million to a single sponsor. However, in reality, the total amount available to a single sponsor is likely to be much smaller. Bangladesh's local banks have limited capacity to finance large infrastructure projects. Local commercial banks are largely limited to making loans with a maximum term of 5–7 years and generally require equity of 25%–35%.

In public sector projects (which are developed, financed and implemented by the government itself), the government seeks support from the development partners (especially in the developing countries) for both technical assistance (for project development including feasibility studies, environmental and social due diligence, etc.) and

actual investment in terms of lending (sovereign loan). Such support from the development partners in public sector projects are arranged upfront at the early stage of project development. In public sector projects the borrowing government agency strictly follows the project development compliances of the development partners and receives their concurrences for each major development stage or milestones. Each of the development partners has established a set of project development compliance requirements in terms of environment, social, procurement (like International Competitive Bidding *aka* ICB of the World Bank) etc.

In PPP projects, as the investment comes from the private sector, the TA required for developing the PPP project becomes important and is generally arranged by the concerned executing agency solely and in most cases without any support from the development agencies. Considering the fact that development partners are invisible in the PPP project development phase, many government agencies follow their own national PPP guidelines which in many cases do not correspond to the required development compliance criteria (especially that of the development partners). The situation is even more complicated where the government does not have a central guideline and agencies develop their PPP project on ad-hoc arrangements.

As such, the development phase of PPP projects becomes very uncertain. Moreover, for PPP projects, even the development partners in many cases do not have a standard framework for project development compliances (where the World Bank has only 3.13 (a,b) in WB's PG for PPP procurement, many other development partners do not have any). There is also much confusion among government agencies on applicability of the ICB of WB in PPP project development where ICB is traditionally used for public sector projects. All these create substantial uncertainty in terms of standard compliances for PPP project development including the procurement, environmental and social due diligence. For example, the government's compensation policy for re-settlement in a developing country like Bangladesh is found quite different from that of ICB of WB or that of ADB.

In PPP projects, as the financing comes at a later stage after the project is developed and awarded to a private sector, due to the huge initial capital requirement, the winning bidder often approaches the development partners for project financing. Moreover, with an emerging banking sector, when the sponsors apply to commercial banks for PPP financing, as per the "*Equator Principles*", the commercial banks also need to follow the compliances of the development partners. Finally, for political risk guarantee or partial credit guarantee, the PPP projects need to ensure compliances of the development partners. As such,

although not being involved in the project development stage, the development partners emerge as the key PPP financing stakeholder especially for large PPPs. For PPP financing decision, development partners then "*look back*" to the development phase of the particular PPP projects to assess their compliances. The depth and coverage of the feasibility study, the level of due diligence in environmental and social studies, and the transparency in procurement is critically examined by development partners. After examining the compliance requirements by the development partner, many PPP projects are found to be non-eligible for development partners' support (e.g. IPFF's rejection of Summit power project or ADB's constraints to support the Elevated Expressway in Bangladesh).

6 Policy Recommendations and Conclusions

Generally public sector projects are significantly different from private sector projects. Interests of these two sectors and the concerned stakeholders vary due to the very inherent nature of objectives that these two sectors try to achieve. Therefore, when a public sector project is selected to be done by a private investor, there has to be some sort of incentive based on which these two sectors can come to the same page. For this reason, government has to consider the concerns of the private sector.

Since PPPs have to be awarded through tenders to ensure transparency of the front end-development of PPPs, the activities prior to the award of a PPP may take a long time to occur. Recently with the establishment of the PPP Office, the Government of Bangladesh has addressed some of the major obstacles associated with PPP projects including project identification process, lack of commercial focus and lack of experience in project development. In future, establishment of the PPP office will certainly assist in PPP project development, transaction and monitoring in Bangladesh.

In addition, public infrastructure projects are identified in the ADP and national five year plans which is not the case for PPP projects. From a national perspective, since private sector infrastructure is encouraged, there needs to be a commercially viable pipeline of PPP projects. In addition, a formal mechanism is needed to segregate between projects which will be carried out under the public sector and those which will be carried out under the private sector. Without this segregation, only a few infrastructure projects will be implemented through the private sector.

For political convenience, governments may often change the rules of operation in the industry after investments are made. As most infrastructure assets cannot be easily transferred to alternative activities (in other words,

has a high degree of specificity), investors are compelled to adjust to such changed situation, which may affect their business case and result in lower returns on their investment. The establishment of an independent regulator can help ensure continuity of rules and credibility of the government. By delegating powers to independent regulators, the government can assure private investors that it would not be able to arbitrarily change any rules or intervene in the market after investments are made.

The Government of Bangladesh has already established a PPP office under Prime Minister's office to supervise the overall PPP project management process. Investors, however, may become wary of high levels of discretionary power granted to independent regulatory agencies. When regulatory risks are considered high, private investors are discouraged from investing in new infrastructure facilities. Investment decisions are made with high risk premiums in a situation of high risks. This in turn can result in high prices of the services for a developing country like Bangladesh.

Except the Power Cell in the power sector, Bangladesh is currently lacking sector specific PPP units. The sector focused PPP unit is particularly needed to perform a wide range of services, including development of PPP policies and legislation, development of guidance material including standard contracts, manuals and processes for identifying and developing PPPs, clearance and approval functions during the PPP, a source of expertise in one or more aspects of PPP procurement and management, development of training programs, dissemination of information on PPPs, and assessment of fiscal costs (direct and contingent) of PPPs. The constitutional nature of a PPP unit varies. One option is to set it up within a ministry and supplement the capacities of the ministry. It can be set up as an autonomous entity, attached to but not fully a part of government bureaucracy. The Philippines BOT Center and Partnerships British Columbia of Canada are formed in this manner.

PPPs in Bangladesh may end up spending substantial time in protracted and extensive negotiations on risk sharing and project specifications with short-listed bidders. In order to avoid this, a move towards a system of competitive dialogue (through pre-bid conference) with short-listed bidders prior to bid submission may be considered. This would facilitate competitive behavior by allowing discussion between potential bidders and the procuring agencies and submission of competitive bids based on a common understanding. There is a need to poll the investor community at the earlier stages of the bid, and factor in their concerns in the concession agreement, around the project viability, with an objective of ensuring greater participation in the bidding process. Increased participation by bidders allows for greater competitive play in

the bidding process and would result in greater value for money for the public sector.

Both development partners and government agencies have common long-term objectives for ensuring country benefits through proper infrastructure facility. Strategic fit for existing gaps in terms of roles and procedures for the development partners in the development phase of PPP projects needs to be ensured with a standard framework for PPP project development. This will also ensure standard project development compliance requirements and subsequent concurrences from the corresponding development partner, saving their effort for "*look back and fix*," while a PPP project travels through its development stages.

At present, Bangladesh does not have any PPP law. The PPP Office has prepared a draft PPP law which is expected to be finalized within 2013. A PPP law advocating the use of PPPs, as well as the rationale for their use, provides country commitment and support for the PPP projects. This is vital particularly in the early years of a PPP program. Using the experience of PSIG, a PPP law is essential for the procuring agencies to enter into PPP arrangements and to protect investor interests that would provide a legally sound framework. From international review, various countries have gone about addressing the issue of PPP law in three different ways, such as no explicit legislation, umbrella PPP legislation and sector specific legislation.

A common PPP legislation for multiple sectors has been used more extensively in countries that operate under the civil code. Philippines adopted BOT law, which covers multiple sectors. India adopted both sectoral and cross-sectoral legislations. Where cross-sectoral legislation is used, it often covers aspects such as specifying which sectors PPPs can operate in, how tariffs for PPPs are set and adjusted, the role of different institutions in a PPP program, procurement of PPPs, and dispute resolution procedures. Legislation can also create new institutions, which will play a key role in the PPP process. Finally, a new law can help clarify the overall legal framework for PPPs by consolidating the provisions needed in connection with PPP.

Executing agencies and private investors are to be aware of the PPP business (especially on commercial and legal aspects of different types of PPPs). Despite the efforts in the past to disseminate knowledge on PPP through training and workshops, a few misconceptions about PPP still persist. Correct information about the range of PPP dealings like BOT Annuity, service delivery PPPs, or performance based management contracting should be disseminated to the concerned stakeholders.

Disclaimer

The views expressed in the research paper are authors' own, and do not reflect the organization in which they work.

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Compromising Cases: An Examination of Dispute Resolution through Special Tribunals for Women and Children in Bangladesh

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Abstract

The Government of Bangladesh, recognizing the crucial role access to justice plays in combating pervasive violence against women and children, enacted the Anti-Women and Child Oppression Act in 2000. The Act establishes special tribunals with exclusive jurisdiction over all cases brought under it in each of Bangladesh's sixty-four districts. The punishments are formidable, including life imprisonment for rape or attack with a corrosive substance. All of the offences are considered crimes against the State, meaning that the victim is legally barred from dropping charges in exchange for a settlement.

In practice, about 90% of the cases end in compromise. To circumvent the legal ban, the victim may agree to testify that no incident occurred, leaving the prosecutor almost completely void of credible evidence against the accused. Further, the financial resources and human capital the State commits to these cases detract from other cases where there is a greater chance of conviction. The Bangladesh legal community is divided on why compromises occur, but tend to strongly believe that either a) the victims harass the accused or b) the accused pressure the victims.

Empirical research conducted for this paper has focused on how the ban on compromise manifests in the tribunals, concentrating on the reasons for compromises and the impact that they have on the rule of law. The research was conducted through observing trials and interviewing judges, prosecutors, defense lawyers, NGO lawyers, petitioners, the accused, and victims.

The research revealed two significant nuances in the reasons for compromises that have significant policy implications. The first is that the victims do not always file cases they intend to compromise out of spite, but rather use the strength of the Act in a desperate attempt to compel a scorned lover to take responsibility for his financial obligations. While the practice serves an essential social function, its value is reduced by the legal ban on human rights based mediators who could assist the parties in reaching a just and sustainable solution. As a result, some women agree to return to an abusive husband or marry their rapist out of belief it will offer financial security. The second is that a judge may also compel parties to settle, especially if s/he believes the victim is financially destitute. This has many negative consequences, including widening the equality divide between rich and poor, increasing men's vulnerability to extortion through false accusations, and eroding the deterrent power of the Act.

This paper demonstrates how inadequate social services and limited opportunities for women in Bangladesh, particularly those who are survivors of violent crime, has resulted in unregulated adaptations to the Act that are eclipsing its intended purpose.

1 Introduction

The people of Bangladesh, particularly women and children, traditionally have no viable legal recourse when they are victims of crimes or deprived of their fundamental rights. The formal justice system is expensive, complex, and time consuming, making it inaccessible to the vast majority of its citizens. Similarly, the local justice system, which is typically controlled by the male village elders, tends to protect the status of the male social elite rather than the rights of women or the poor. To complicate matters further, women in rural villages are typically

dependent on their husbands for financial support, which leaves them almost no means by which to escape from dangerous domestic situations.

In 2000 the Government of Bangladesh enacted the Nari-o-Shishu Nirjatan Daman Ain (in English "*the Anti Women and Children Oppression Act*") in order to "*prevent rigidly the offences relating to Woman and Child Persecution.*"¹ The Act establishes special tribunals, known as Nari-o-Shishu tribunals, with exclusive jurisdiction over all cases brought under it in each of Bangladesh's sixty-four districts. Punishments under the Act are

formidable, including the death penalty and mandatory life imprisonment. All of the offences included in the Act² are considered crimes against the State, and are thus not legally permitted to be compromised out of court.

Contrary to the interests of the Government, which include punishing wrongdoers and preventing future incidents of violence against women and children, few of the cases filed in the tribunals result in conviction. Research by GIZ, the federal agency of Germany that provides economic and development assistance around the world, revealed that between 2001 and 2007 the Nari-o-Shishu tribunals disposed of 2,000 cases, only 200 of which ended in conviction (10%) (Yasmin and Huq 2008). Even more concerning, statistics from the government run One Stop Crisis Centers (O.C.C.), which provide free medical care, legal services, and temporary shelter to survivors, reveals that only 33 of the 2,076 cases that have been resolved since its inception ended in conviction (1.6%, Network for Improved Policing in South Asia 2012).

Most of the cases that do not result in conviction are actually compromised between the parties, despite the legal ban. For example, compromise was used to resolve 1,896 of the cases at the O.C.C. (90%, Network for Improved Policing in South Asia 2012). Similarly, judges and public prosecutor interviewed unanimously estimated that at least 90% of the cases in the tribunals are resolved through compromise.

The ban on compromise can be easily circumvented if the alleged victim testifies that no incident took place, or that the accused was not responsible for the crime, in exchange for a financial settlement or a promise to cease the abhorrent behavior. The accused, who is almost always placed in pre-trial detention after a mere accusation³ and faces overwhelming legal fees in order to file a bail application⁴ is typically willing to compromise in order to end the ordeal, even if he is innocent. While the State may continue to prosecute the case, it is difficult, if not impossible, to prove criminal culpability when the victim recants on her story. This is especially true in a country like Bangladesh where forensic evidence is not commonly used. There are also judges and public prosecutors who allow victims to testify that an out of court compromise has been reached and it is no longer necessary to proceed with the case.⁵ These cases are then treated as acquittals.

The public, particularly the legal community, tend to be split in their belief on why cases compromise. One view, which is held strongly by lawyers from many legal aid NGOs, is that women do not want to proceed with cases because they are threatened by the accused. They cite examples where a poor girl is hospitalized after being brutally assaulted, but disappears the moment she is discharged. On the other end of the spectrum is the view held by almost all defense lawyers, that the alleged vic-

tims are bringing false and vexatious cases to exploit men. They frequently point to examples where a woman is unable to produce evidence, such as a medical certificate, to substantiate her allegations and demands large sums for the case to be settled. This paper uses case studies to demonstrate that there is a third reason why compromise is prevalent: the alleged victims, commonly acting on the suggestion of a lawyer or judge, use the tribunals to compel a person, typically a (ex) husband or the father of her child, to meet his financial obligations. This does not mean that victims are not fearful of the perpetrator or that allegations are never fabricated; rather it means that there is an additional, overlapping force that requires due policy consideration.

This paper is divided into five sections. Following this introduction is section two, which contains the research methodology. Section three then explains why women are drawn to the tribunals in order to obtain social and financial security. Section four exposes how the current unregulated use of compromise deteriorates the rule of law and leaves both victims and the accused vulnerable to abuse. Section five concludes by cautioning that compromise will continue to be pervasive in the tribunals as long as poverty and patriarchy are prevalent and recommends that the ban on compromise be modified to allow greater conformity with established human rights based principles and strengthen the rule of law.

2 Methodology

The primary methodology used in this study was participant observation in the formal courts of Bangladesh. A total of thirty-four days were spent in court during the course of the research period. Trials were observed in a variety of locations to gain an understanding of how the size of the district and philosophies of the judges and public prosecutors influence the proceedings. The locations selected were Barisal, Chittagong, Dhaka, Khulna, Madaripur, Rangamati, and Sirajganj.⁶ Whenever possible, interviews were conducted with judges and public prosecutors of the tribunals and courts visited. Informal interviews were held with defense lawyers, representatives from legal aid NGOs, petitioners, victims, and the accused.

Two NGOs also provided the opportunity to travel to villages in Khulna, Madaripur, and Sirajganj, to speak with people who were affected by the Nari-o-Shishu tribunals away from the court setting. All of the subjects were pre-selected by the NGO, and the staff sought their preliminary permission. Those who agreed were again told of the voluntary nature of their participation and informed consent was obtained both prior to and after the interview.

The names of those who were willing to share their experiences or allow their work to be observed have been excluded or changed due to concerns of retribution. In addition, the locations have also been omitted because there is only one tribunal in many of the districts that were observed.

3 Motivation to Compromise Cases through the Tribunals

Bangladesh is permeated by a strong patriarchal culture that subjects countless women to a lifetime of discrimination, neglect, and violence in all facets of their public and private lives (Kabeer 2003, Naripokkho 2011). To quote the government, “*Women’s social vulnerability is all-pervasive and endemic. Discrimination against women at the social level are reflected in their confinement within the homestead, lack of mobility in the public space, women’s early marriage, etc. Women have weak protection socially and legally in the event of break-up of marriages. They face high levels of vulnerability such as losing honour, high degree of divorce and abandonment*” (Government of Bangladesh 2005). Domestic violence is also rampant (BBS 2005, Schuler and Islam 2008, WHO 2005)⁷ and generally accepted by society (Begum 2005, UNICEF 2009).⁸ This section demonstrates how poverty and a strong patriarchal society makes manipulating the Nari-o-Shishu tribunals an alluring option for women who have been abandoned, neglected, or mistreated by the person responsible for their social and financial well-being.

3.1 Unable to Return to the Natal Home

In Bangladesh it is not uncommon for families to arrange a marriage for their daughters because they simply cannot afford to continue to provide support for basic necessities. A 2008 study on why female victims of domestic violence did not return to their natal home collected the following comments from victims and their families:

- A forty-year-old farmer’s wife stated “*No way to go back and stay in one’s father house. What would a woman eat after going back to her parents? They have trouble enough providing for themselves. That’s why a woman stays in her husband’s home no matter what he does to her.*”
- A mother explained that her daughter, who was regularly tortured by her husband, lived with her for 15 days every month. She wishes her daughter could live with her full time, but she cannot afford it (Schuler, Bates and Islam 2008).

3.2 Dearth of Social Services:

In theory the Government of Bangladesh offers around thirty social safety net programs to support its most vul-

nerable citizens, including poor women. The programs include a 100-day employment guarantee scheme, a food for work program, and a vulnerable group feeding program (UNDP 2009). In practice, only 23% of the country’s poorest 10% actually receive any social services (Human Rights Watch 2012). Reasons why the intended recipients are not receiving social services include that they are required to pay a bribe above their financial means, that corrupt politicians see that the services go to their families and friends, or eligible women are unaware of the services (Human Rights Watch 2012, Kabir 2012). Additionally, the services offered reportedly fail to meet the medical, legal, and social needs of female victims of violent crime (Chowdhury 2007).⁹

3.3 Ineffective Family Courts

The government also attempts to provide judicial remedies for financially destitute women through the family courts.¹⁰ In practice, the courts work well to meet people’s needs when there are two parties willing to resolve the issues, but are ineffective when the divorce is contested.¹¹ The following case study, provided by a family court judge, illustrates that the family courts fail to provide for the administration of justice when one of the parties is uncooperative. The judge picked a case that happened to appear on his docket the day of the interview to emphasize that the narrative is typical.

Case Study #1

The petitioner/wife filed a case in 2008 requesting that she receive *dower* (financial compensation promised to the bride at the time of marriage) and maintenance. The respondent/husband refused to answer her *plaint* (the document that sets out the issue at hand and what she was requesting as compensation). After two years of silence from the respondent/husband, the judge issued an order that the husband pay a 3,000 taka (\approx \$40 USD) fine and allowed the wife to file the case *ex-parte* (without a respondent). The husband appealed, and the case was put on hold while the district judge decided whether the order should stand. In 2011, the district judge ruled that the husband did not need to pay the fine, but permitted the case to proceed *ex-parte*. The case is ongoing, and the wife has yet to obtain any financial relief for either herself or their two children.¹²

3.4 Weak Domestic Violence Legislation

In 2010 the Government enacted the Domestic Violence (Protection & Prevention) Act to protect women and children from physical, sexual, economic and psychological abuse. Under the Act, the court is authorized to award a victim of domestic violence with just and reasonable monetary compensation for personal injury (including psychological), property damage, and financial loss.¹³ Unfortunately, the Act is not yet being used. As of October 19, 2011 only four cases had been filed under it,¹⁴ which is reportedly due to a combination of a limited education campaign about its existence and relatively weak penalties against the perpetrator.

3.5 Remedies through the Nari-o-Shishu Tribunals

In comparison to the other options, filing a case under the Nari-o-Shishu Act provides the greatest protection and leverage to the alleged victim for the reasons set out in the introduction. Although the Act allows for financial compensation for the victim, such as making the State responsible for child support from a child proven to be born of rape,¹⁵ compromise is still an appealing option for most petitioners because it provides the alleged victim a quick remedy to their often urgent situation and relief is not dependent on establishing proof beyond a reasonable doubt. Following are two case studies which are representative of the women and girls with whom I spoke. The first demonstrates how destitute women and girls sometimes exaggerate or fabricate the allegations in order to compel a compromise. The second explains why compromise is often preferred by alleged victims, even when they have a valid claim under the Act.

Case Study #2

In the following case study, the alleged victim is put in the precarious situation of deciding whether to bring a false case under the Act in order to obtain financial support. By choosing to lie under oath, and technically manipulate the judicial system for her own personal gain, she has indicated a lack of respect for the rule of law. Further, it requires the State divert resources from other cases that could lead to a criminal conviction, thus deteriorating its power, both actual and perceived, to prosecute cases. While her action of knowingly bringing a false case is technically a crime which carries with it a sentence of seven years of imprisonment,¹⁶ the reasons for her actions invoke a sense of understanding that makes punishment seem

inappropriate. Rather, it is the State that appears culpable for failing to provide a means of redress for her dire situation.

Fatima was raised in a very poor family and when she was fourteen years old her family could no longer afford to feed or clothe her. Her father arranged for her to marry the inspector of the postal department, a forty-five year old man who was a friend of his brother, and she was sent to live with him and his family. After just a few months, he was no longer interested in Fatima. He would say to her “*when I married you, you were beautiful, but you are not beautiful anymore.*” She was kept in his home, but he would not visit, and she felt very lonely. The situation kept getting worse and she begged her family to take her home. Her family said that they were unable to afford to take her back, and that she should try to save the marriage by having a child. She soon became pregnant, which pleased her husband until she delivered a daughter, not a son. He refused to pay the medical expenses and kicked his wife and daughter out of the house immediately following the birth. Fatima had no choice but to move home, but her family is unable to support her. The family often goes to bed hungry and she cannot buy her baby medicine. She tried to file a case in the family court, but her husband did not appear for over a year. Her lawyer suggested that she bring a case for torture for dowry under the Nari-o-Shishu Act. She knows that she should not bring the case because her husband never physically tortured her nor demanded dowry, but she is not sure how else she can get him to take financial responsibility for her and her daughter.¹⁷

Case Study #3

In the next case study, the alleged victim uses the accusation of rape in an attempt to reconcile her relationship with a scorned lover and father of her child. It is important to note that while the allegation meets the definition of rape under the Act,¹⁸ the petitioner only intends to characterize the incident as such until she is able to compromise. Once a compromise is reached, she will likely take the stand and recant her previous accusation under oath. This could decrease the credibility of other women who choose to come forward as rape survivors, making the justice system even more unavailable to them. It also depletes judicial and prosecutorial resources that could have been devoted to cases that had a better chance of leading to conviction. Similarly to the previous case study, however, the story is one of desperation rather than malice.

Rafia was spending a lot of time with a man from the neighborhood, and upon his promise to marry her, agreed to enter into a sexual relationship with him. They had not yet married when she conceived a child. Her boyfriend denied paternity the moment he learned of the pregnancy. Rafia, not knowing how she would pay the bills to support herself and her child, threatened to file a rape case against him unless he agreed to marry her. At first he agreed, but then he absconded before the marriage took place. A local NGO attempted to assist her with compromising the case, but the boyfriend did not appear. They then advised her to file a rape case against him, which she did. Despite their now strained relationship, she is clear that she does not want him to serve time in prison, but rather to marry her and take personal and financial responsibility for her child. She is concerned that if they do not marry, she will never find anyone to support her or her child.¹⁹

4 Negative Consequence of Compromise

While compromising a case can theoretically help financially destitute and socially vulnerable women and girls, the absence of human rights based interventions resulting from the legal ban can result in the alleged victim being compelled to return to a dangerous living situation and denied a fair trial. It also leaves her no recourse if the accused fails to meet the terms of the non-binding agreement. Not only do these problems affect individuals, but they promulgate a weak rule of law.

4.1 Dangerous Living Situations

Of particular concern from a human rights perspective are compromises that require the alleged victim to begin or return to a conjugal life with the accused. There were several observed examples where the alleged victim, with obvious emotional distress, would testify that an incident did not occur, the accused was not the perpetrator, or that she had reached a compromise. In one poignant example a woman sobbed as she testified that she had reached a compromise with the man who allegedly raped her: he would pay an undisclosed amount of money and they would marry.²⁰ Equally alarming are the cases where women return to their abusive husbands. The abuse is likely to continue, if not intensify, once the couple is reunited considering that the perpetrator is more likely to have become

angered, rather than rehabilitated, during his stay in pre-trial detention.

4.2 Right to a Fair Trial

Well-meaning judges in five districts self-reported that they encourage parties to compromise when they believe the victim would benefit more from a financial settlement than having the perpetrator sentenced to a hefty prison sentence. While their intentions are noble, in practice, the judges are in essence creating two justice systems: one where women who appear to have financial resources are able to pursue criminal sanctions and another where the poor are compelled to compromise. In doing so, clear messages are sent to society, including wrong-doers, that the State prioritizes the safety of the wealthy over the poor and that a crime against a poor woman is less serious than a wealthy one. As way of illustration, the following interaction was transcribed in a tribunal on March 30, 2011:

Judge: “You married him, now you don’t want to marry him, isn’t there a chance of reconciliation?”

Alleged victim [crying]: “No, please don’t send me back. They all beat me up. I am happy in my father’s home and I do not want to go back. Please, I will withdraw the case, but do not make me compromise.”

Accused [from the lock-up in the back of the courtroom]: “We tried to mediate, but she refused.”

Judge: “Where is her father? Bring her father in.”

Father enters

Judge to the father: “Are they paying maintenance?”

Father: “No”

Judge to the father: “If you want mediation the court can help.”

Judge to the alleged victim: “Once you pass a certain period there is no way back, are you sure you want to move forward, think twice.”

Alleged victim: “I am sure I want to move forward.”

Judge: “Most of these cases can be resolved through mediation, are you sure?”

Alleged victim: “I want justice.”

Judge: “If it is possible to live together this lawyer can help you figure it out, but if you don’t want to, that is ok. I will give you more time to think about it.”

Alleged victim leaves the courtroom and is brought back about ten minutes later by an assistant to the court clerk.

Judge: “How long do you think you need to think about whether you want mediation? 15 days? Is that enough?”

Alleged victim: “Yes”

Judge: “Ok, see you in 15 days.”

4.3 Sustainability of Compromised Resolutions

Another danger of compromise in the tribunals is that the parties have not had the benefit of human rights based mediation, a process by which an un-biased mediator aids the disputing parties to reach a mutually agreeable solution in-line with established human rights based principles, such as gender equality (UN General Assembly 1948, Articles 1 and 2) and freedom of choice in marriage (UN General Assembly 1948, Articles 16.2). Failing to make, and memorialize, a mutually agreeable solution that protects the rights of both parties makes the compromise unlikely to be honored after the threat of pre-trial detention and high legal costs has subsided. The following case study demonstrates how compromises which are designed to meet the needs of financially destitute women are not always able to offer her the protections she needs and desires.

Case Study #4

When Rashida was eleven years old, she was grabbed by the throat, abducted, and raped. She told her mother, who took her to the hospital and filed a case with the police. After a few months, her family, worried about their daughter's future, compromised the case with the perpetrator: the two would marry. Rashida and her husband lived together for several years and had two children, who Rashida made clear that she adores. A few years ago the husband left without warning and has not looked after them since. She has heard rumors that he has married again. It is hard for her to support her children without his assistance. She feels desperate, but is convinced that the justice system cannot improve her situation.²¹

5 Conclusion

This paper demonstrates that extreme poverty and a patriarchal society in Bangladesh severely restrict options for women and girls, particularly those who have been victims of violent crime, to realize social and financial security. One of the main reasons is that they frequently lack the luxury to bypass a compromise in order to pursue punitive sanctions against the perpetrator. They are also typically unable to access necessities, such as food and shelter, unless they utilize the threat of pre-trial detention and high legal fees to secure their financial well-being.

Additionally, it shows that the Nari-o-Shishu Act, in its current form, is falling short of its intended purpose.

Alleged victims are purposely not proceeding with legitimate criminal cases or knowingly exaggerating allegations, often due to encouragement or pressure from judges, in order to obtain their notion of justice which typically conflicts with the State's goal of prosecuting the accused. As a result, scarce judicial resources are being diverted from administering the Act to supporting an unregulated and often biased means of conflict resolution that has repeatedly put the safety of women and children in jeopardy and facilitated the extortion of countless men who are legally innocent. Further, it makes the formal justice system, particularly the tribunals, increasingly inaccessible to future survivors because witnesses are losing credibility, backlogs caused by a plethora of unintended cases are causing insurmountable delays, and society's respect for the Act is being replaced by an understanding that it can be easily manipulated for one's personal gain.

One option to address these problems would be for the State to amend the Act to allow, if not provide, human rights based mediation and counseling to interested parties. Around the world human rights based mediation is gaining popularity as a means to resolve various types of disputes because it is typically more satisfying for the accused, victims, and society than the formal justice system (United Nations Office on Drugs and Crime 2011). Legal aid NGOs in Bangladesh, including Ain-o-Shalish Kendra, the Bangladesh Legal Aid and Services Trust, and the Madaripur Legal Aid Association, have had great success with human rights based mediation, but avoid it in any instance when a case has been filed under the Act due to the legal ban. Allowing human rights based mediation for cases filed under the Act could provide greater oversight of coercion and assist parties who opt to compromise to develop agreements that are just, safe, and sustainable. Implementation of the Act would also improve by reducing the number of cases that are filed with the intent to compromise, thus a) reducing the number of witnesses who do not tell the truth (or the whole truth) under oath to secure a compromise and b) increasing the judicial resources devoted to cases that are more likely to end in conviction. The role of judge as adjudicator would also be clarified, reducing the likelihood of paternalistic pressure to compromise.

Human rights based mediation in the tribunals is not appropriate in all cases, however. There are many perpetrators of truly heinous crimes who inflict terror upon their victims with virtual impunity because the victims are too poor to pursue criminal sanctions. There are also innocent men who are extorted into large financial settlements in order to avoid legal fees and time in prisons. Human rights based mediation can therefore be used as a way to improve a damaged system, but not as a means to fix it. The only effective remedy for preventing the current manipulations of justice is to address the root causes, mainly a dearth of

social services, lack of social mobility for women, a culture that tolerates violence against women and children, and limited civil remedies for divorce/child support. Until these issues are resolved, the need for financial and social security will continue to trump respect for the rule of law, and will manifest through compromising cases in the Nari-o-Shishu tribunals, whether or not the victim or the State would like to pursue criminal sanctions.

Endnotes

1. Preamble
2. The Act does not actually cover all incidents of Violence against Women. Most notably, murder, grievous hurt, and simple hurt can only be tried by the tribunal if one of four conditions are met: 1) it resulted from a rape or attempted rape; 2) if it was motivated to compel dowry from a woman; 3) the offence was committed with a “*combustible, erosive or poisonous substance*” or 4) if it was inflicted on a child for the purpose of begging or selling limbs. In its 2005 Poverty Reduction Strategy Paper, the government stated that it planned to include domestic violence in the Act, but to date that amendment has yet to be made.
3. Of the 73 men accused men interviewed, 71 served time in pre-trial detention (97%).
4. Although Bangladesh technically runs a legal aid scheme for indigent clients, only 1 of the 73 accused surveyed received a free lawyer from the State. Those who were able to pay were charged between 3,000 and 15,000 taka to begin the case and 500–5,000 taka per appearance, which is well beyond the reach of the vast majority of citizens. According to the World Bank, in 2010, 76.54% of the population lived on less than \$2 USD a day, about 140 taka.
5. It is not clear how the judges and prosecutors are able to do this. Even the head of the bar association in one of the districts where cases were acquitted if victims testified that a compromise had been reached was unclear how this was permitted, but credited it to both a lack of oversight and a desire of supervising judges to compromise cases.
6. It should be noted that neither Barisal nor Rangamati had a dedicated tribunal at the time of the visit.
7. BBS (2005) estimated that 75% of women in Bangladesh had experienced both physical and sexual violence; Schuler and Islam (2008) found that 67% of the respondents reported they had been beaten by their husbands; WHO (2005) found that 53% of the women in urban areas and 62% in the rural areas had been subjected to physical or sexual violence by a partner.
8. Begum (2005) found that 77% of Bangladeshi female respondents reported that they believed that a husband had the right to beat his wife; UNICEF (2009) found that 41% of female respondents aged 15–19 reported that a husband is justified in hitting or beating his wife under certain circumstances.
9. While crisis centers and shelter homes have been established throughout Bangladesh, the need still outweighs the demand. For example, the One Stop Crisis Centers referenced earlier are only able to provide shelter for a few days and most facilities have only eight beds. Similarly, the GOB established a Victim Support Centers in 2009 to provide shelter and coordinate medical and legal assistance for women and children who have been victims of domestic violence, trafficking, acid burns, sexual harassment, and rape, but between 2009 and 2010 the centers saw only 828 alleged victims and offered each up to five days of protection. There are also shelter homes established by NGOs around the country, but even one of the most well-known is only able to help about fifteen women a year
10. The Family Court Ordinance, Ordinance No. XVIII of 1985, Bangladesh, at Article 5.
11. Human Rights Watch, *Supra* Note 16 (at page 8: “*Family courts have primary responsibility for enforcing Bangladesh’s personal laws, but are plagued with procedural and administrative problems. Lawyers, former judges, and activists told Human Rights Watch that enforcement of court orders can take years, and is often riddled with problems around summons and notice procedures and processes for executing court decrees.*”
12. Interview on September 11, 2011.
13. Domestic Violence (Protection and Prevention) Act, 2010. [Best current English summary available retrieved on Feb. 26, 2012 from www.bdtips.com/ArticleBody.php?ArticleID=5106#2nd]
14. Proper Implementation Stressed *The Daily Star*, (2011, October 19). Retrieved from www.thedailystar.net/newDesign/news-details.php?nid=207072
15. Nari O Shishu Nirjaton Daman Ain. Act N. VIII of 2000, amended 2003, Bangladesh. Section 13 (c)
16. *Id.* at Section 17
17. Interview on April 20, 2011.
18. Section 9 of the Act defines rape to include consensual sexual relations with a woman if the consent was obtained through fraud, such as an unrealized promise to marry
19. Interview on April 13, 2011.
20. Court observation on March 7, 2011.

21. Interview on April 4, 2011.

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Crop Choice as Climate Change Adaptation in Agriculture of Bangladesh: Policy Implications

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Abstract

Among the different production systems, agriculture will face significant adverse impacts of climate change. There are a number of strategies which are considered as means to climate change adaptation in agriculture. Among all the strategies, recent research focuses on crop choice as a strategy of climate change adaptation. Bangladesh and its agriculture sector is already vulnerable to many climate change related extreme events. Using crop choice as dependent variable and seasonal temperature, rainfall and household characteristics as explanatory variables in limited dependent variable multinomial logit model, this research finds that the farmers of Bangladesh change their crop choices to adapt to climate change over time. Examining the major six crops of the country, the paper finds that a shift in major crop choices especially in rice varieties will occur in Bangladesh if the climate change scenario is predicted properly. This paper also discusses the agriculture and environment policies of the country. This paper highlights how crop choice as a climate change adaptation strategy can be incorporated in the relevant policies of the government of Bangladesh.

1 Background

Climate change has been mentioned as the biggest market failure we ever faced, the biggest exercise in applied Bayesian probability theory and the perfect moral storm (Gardiner 2006, Stern 2008, Weitzman 2009). Climate change is an environmental issue having significant implications for poverty and inequality. It is widely agreed that the hefty toll of climate change on developing countries is much more than that of the developed countries. The immediate channel through which this cost is likely to be accrued is agriculture and food security. Bangladesh is already vulnerable to many climate change related extreme events and natural disasters. The fourth assessment report of the intergovernmental panel on climate change (IPCC) for South Asia predicts that monsoon rainfall will increase, resulting in higher flows during monsoon season in the river system. More water in monsoon causes floods, and low water flow and erratic behavior of rainfall will result in intense and frequent drought. It has also been predicted that sea level rise will be between 0.8 to 0.9 meters which will lead to salinity intrusion and coastal flooding. Among different production systems, agriculture will face significant adverse impacts of climate change due to change in hydrological regime.

Policy makers have two non-mutually exclusive options for formulating climate change related policies - mitigation and adaptation. There is a long debate on intergen-

erational justice linked with climate change mitigation, as it requires a huge investment at present which will bear fruit only for future generations. However, this research will limit its scope to adaptation to climate change as the economic reality of Bangladesh will not allow the country to go for a huge investment for mitigation; rather, adaptation to climate change is pragmatically favorable. The IPCC (2001) defines adaptive capacity as the ability of a system to adjust to climate change (including climate variability and extremes), to moderate potential damages, to take advantage of opportunities, or to cope with the consequences. The goal of an adaptation measure should be to increase the capacity of a system to survive external shocks or changes. The IPCC (2007) also defines adaptation as the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. The International Food Policy Research Institute (IFPRI 2007) defines adaptation as the process of improving society's ability to cope with changes in climatic conditions across time scales, from short term (e.g. seasonal to annual) to the long term (e.g. decades to centuries).

There are a number of strategies which are considered as means to adapting to climate change in agriculture. Bradshaw, Dollan and Barry (2004) have mentioned a number of adaptation strategies which are in the following: crop diversification, mixed crop livestock farming systems, using different crop varieties, changing plant-

ing and harvesting dates, and using drought-resistant varieties and high-yield water sensitive crops. Di Falco and Veronesi (2011) have identified a set of strategies (e.g., changing crop varieties, adoption of soil and water conservation strategies) for climate change adaptation in Nile basin area. Wang, Mendelsohn, Dinar and Huang (2008) have mentioned adjusting irrigation practices, crop varieties and livestock species to both temperature and precipitation levels as adaptation strategies. Empirical work on crop choice and climate change adaptation were limited mainly to the developed countries. Although climate change is expected to have a devastating effect on agriculture in the low latitudes countries, the empirical work on crop choice is virtually nonexistent there (Wang et al. 2008). But in recent years, this research has extended to Latin America (Seo and Mendelsohn 2007), and to Africa (Di Falco, Veronesi and Yesuf 2011a). Still empirical research on climate change adaptation through crop choice is almost nonexistent in South Asia, especially in Bangladesh. Most studies on adaptation to climate change in Bangladesh are limited to climate change adaptation strategy setting. Being an agrarian economy, the importance of climate change adaptation in agriculture sector in Bangladesh is huge.

This paper will analyze how farmers in Bangladesh use crop choice as a way of adaptation to climate change. It will also investigate how climate change forecasted scenarios in Bangladesh generated from different environment models (GCM and PRECIS) impact future crop choice probabilities. Finally, the policy implications of predicted future crop choice probabilities and the way of incorporating those implications in the relevant policy arena will be discussed. Section 1 has presented the background along with objective and organization of the paper. Section 2 will focus on the literature on climate change adaptation in agriculture sector and Section 3 will present the theoretical framework, methodology and data used in this paper. Section 4 will analyze the empirical results and section 5 will discuss the policy implications followed by conclusions in section 6.

2 Literature Review

A number of recent articles have examined crop choices as an adaptation strategy in agriculture. For example, Seo and Mendelsohn (2007) have shown that Latin American farmers adapt to climate by changing crops. Taking 2,000 farmers from 8 Latin American countries, the paper shows that both temperature and precipitation affects crop choice of farmers. It also shows that predictions in the impact of climate change must reflect not only changes in yields or net revenues, but also crop switching. Wang et al. (2008) recognized switching crop choice as a way of adaptation to climate change in China. This paper, surveying 8,405

farmers in 28 provinces in China, finds that Chinese farmers are more likely to irrigate in case of lower temperatures and less precipitation. The paper also shows that future climate scenarios will cause farmers in China to reduce irrigation and shift toward oil crops, wheat, and especially cotton, moving away from potatoes, rice, vegetables, and soybeans. Another finding of the paper is that adaptation will likely vary to a great extent from region to region. (Kurukulauriya and Mendelsohn 2008), using a sample of over 5,000 farmers across 11 countries in Africa, find that farmers shift crops to match change in climate.

Di Falco et al. (2011a) examined the driving forces behind farm households' decisions to adapt to climate change, and the impact of adaptation on farm households' food productivity in the Nile basin of Ethiopia. This paper finds that there are significant and non-negligible differences in food productivity between farm households that adapted and those that did not adapt to climate change. Econometric results show that information on both farming practices (irrespective of its source) and climate change is crucial in affecting the probability of adaptation. It is found that farm households with access to credit are more likely to undertake strategies to tackle climate change. Di Falco and Veronesi (2011) investigate whether the set of strategies (e.g., change crops, soil and water conservation) implemented in the field by farm households in response to long-term changes in environmental conditions (e.g., temperature and rainfall) affect production risk exposure, which is based on the survey undertaken in the Nile basin area of Ethiopia in 2005. One of the major findings of the research is that there are significant differences in downside risk exposure between farm households that did and those that did not adapt to climate change.

In a UNFCCC workshop on adaptation in 2004, a number of newly innovated adaptation strategies in agriculture sector of Bangladesh were mentioned with pictorial definition (Ahmed 2004). Integrated farming was one of the adaptation strategies as mentioned in the UNFCCC workshop. Integrated rice-fish farming can play an important role in increasing food production as the integrated farming system is better than monoculture in terms of resource utilization, diversity, productivity, and both the quality and quantity of the food produced (Ahmed and Garnett 2011). Using the Cobb-Douglas production function model in the survey data of Bangladesh, they have shown that the highest average annual productivity of rice per hectare was found in integrated farming (10,178 kg), followed by rice monoculture (9,691 kg) and alternate farming (4,986 kg).

3 Theoretical Framework, Methodology and Data

An overwhelming number of studies (Amthor 2001, Cline 1992, Fuhrer 2003, Rosenzweig and Parry 1994) have contributed to the assessment of climate change impacts on agriculture. Those studies mainly look into how temperature, carbon emission, sea level rise and such climatic variables impact the crop yields. Mainly agronomic models have been used in these studies by setting a direct relationship between climatic variables and crop yields. Since these studies assume that farmers make no change in crop choice, the predicted net revenue losses in the crop yield resulting from the climatic variables are large.

There are four competing strands of research on the economic impacts of climate change on agriculture: agronomic, panel data, agro-economic and Ricardian. The agronomic literature predicts large and dire yield losses (Rosenzweig and Parry 1994) especially in many areas of Africa (Gbetibouo and Hassan 2005). Panel data studies examine weather surprises and also suggest climate change will be harmful, though their predictions are not as dire as those of the agronomic studies (Deressa, Hassan and Poonyth 2005, Deschenes and Greenstone 2007). Agro-economic models take farmers' yield losses as given, but predict that farmers can reduce the impact by switching crops. Finally, the Ricardian model captures the actual adaptations that farmers make and measures the final net impact (Mendelsohn and Dinar 2003, Mendelsohn, Nordhaus and Shaw 1994). The problem with the first two approaches is that they do not capture adaptation and so overestimate damages. The problem with the agro-economic approach is that the burden of capturing adaptation falls on the analyst. Finally, the problem with the traditional Ricardian approach is that it is a "black box" so that the actual adaptations by farmers are not revealed. (Kurukulasuriya and Mendelsohn 2008) developed a structural Ricardian Model to overcome the shortcomings of the overstated four types of models. This paper will employ the structural Ricardian model with the following assumptions: (a) farmers are assumed to maximize their profits, (b) farmers choose the desired species to yield the highest net profit, (c) probability that a crop is chosen depends on the profitability of that crop, (d) when farmers select multiple crops, the crop choice is defined as the single crop with the greatest net revenue, and (e) all lands are suitable for all crops production.

Farmer i 's profit function in choosing crop j ($j = 1, 2, 3, \dots, J$) is:

$$\pi_{i,j} = F(C_i, S_i) + \varepsilon(C_i, S_i)$$

Here the vector C includes climate, soils, and price variables and S includes the socio-economic characteristics.

F represents observable components and ε error term. The farmers will select the variety of crop that will generate highest profit. Usually farmers produce multiple crops. But, for setting a meaningful econometric model, the single crop with highest revenue will be defined as crop choice. Farmers will select crop j over all other crops k at a certain combination $Z(C, S)$ such that

$$\pi_j^*(Z_i) > \pi_k^*(Z_i) \quad \text{for } \forall k \neq j$$

Assuming error term ε is independently Gumbel distributed and $F_k = Z_{ki}\gamma_k + \alpha_k$, the probability of choosing crop j from J set crops will be:

$$P_{ij} = \frac{e^{Z_{ij}^{\gamma_j}}}{\sum_{k=1}^J e^{Z_{ik}^{\gamma_k}}}$$

The coefficient of the explanatory variables in the multinomial logit model will provide the probability of the explanatory variables in the form of log odds.

Rainfall and temperature of six seasons (Summer, Rainy, Autumn, Dry, Winter and Spring) of Bangladesh have been included in the multinomial logit model as explanatory variables while crop choice is the dependent variable. Other explanatory variables of the model are agricultural land owned by farmers, family size, agricultural inputs like irrigation, fertilizer, insecticides, wage labor, space of house, mobile phone and electricity. Agricultural inputs data are mauza (the lowest unit) specific. The crops of the model are produced in various times of the year. Both planting and growing season's environmental characteristics affect the production of the crops. Therefore, statistical significance of planting and growing season's environmental characteristics are of special interest. The repeated cross sectional data come from three cohorts of *Household Income and Expenditure Survey* (HIES) 2000, 2005 and 2010. Therefore, two time dummies for the years 2005 and 2010 are included in the model. The estimated crop choice probability from the multinomial logit model is used for predicting the future trend of crop choice probability under different assumptions of climate change scenarios. After looking at the predicted future trend of crop choice probability, the policy implications are analyzed. How the existing environment and agriculture related policies can accommodate the climate change adaptation in Bangladesh is presented in this paper.

The data on crop choice, amount of land owned, crop price, size of the agri household and other characteristics such as using mobile phone and electricity have been collected from the HIES data from the Bangladesh Statistical Yearbook 2009 (BBS 2011). The availability and relevance of the data to the need of the present research constrained it to use the HIES data of 2000, 2005 and 2010.

The number of households used in this research is around ten thousand. The environmental data is from 1996 to 2010, which have been collected from the Bangladesh Meteorological Office. Average of the past five year environmental data is used against the 2000, 2005 and 2010 crop choice data of the households.

4 Empirical Results

Six major crops have been considered in this model: Aman (41.02%), Aus (17.22%), Boro (38.80%), Wheat (0.73%), Jute (1.29%) and Sugarcane (0.94%). Among the six species, first three are rice crops. Table 1 presents the results of the multinomial logit regression. Aman rice is left out here as it is treated as base case in the regression. Rainfall in the summer season affects the crop choice of Boro significantly, while that in the rainy season impacts Aus, Boro and Wheat significantly. Rainfall in the dry and spring season affects the crop choice of Aus and Boro positively. Family size affects the crop choice of Aus and Jute positively and Sugarcane negatively. Summer temperature affects the crop choice of Aus and Boro by a small probability, but these are statistically significant. Temperature in the rainy season impacts the crop choice of Aus by a large probability at 1% level of significance. Operating land, crop production and all the four inputs (irrigation, fertilizer, wage labour and insecticides) included in the model affects the crop choice of Aus significantly, while Operating land, crop production and two inputs (irrigation, fertilizer) impacts the crop choice of Boro significantly. The estimation results in Table 1 indicate that both rainfall and temperature are more sensitive to the crop choice of rice compared to wheat, jute and sugarcane.

General Circular Model (GCM) is a global scale and Providing Regional Calamities for Impact Studies (PRECIS) is a regional scale model to provide the future climate change scenario. GCM predicts an average temperature increase of 1.0° C by 2030, 1.4° C by 2050 and 2.4°C by 2100. PRECIS forecasts the increase in rainfall of 4.0% by 2030, 2.3% by 2050 and 6.7% in 2070. Table 2 summarizes all these predictions below.

Figure 1 depicts the effect of predicted temperature derived from GCM model on crop choice in Bangladesh in the time period 2010–2100. There will be a clear relocation of crop choices if temperature rises. Aman crop will fall by a significant amount while other two rice varieties will be chosen more by the farmers. Probability of choosing jute will rise significantly. Wheat and sugarcane will also be chosen more as temperature increases.

5 Policy Implications from Climate Change Adaptation

5.1 Climate Sensitivity on Crop Production

The present research finds that crop pattern will change with the rising temperature and rainfall in Bangladesh in future time periods. This implies that farmers will be more willing to cultivate the climate change tolerant or insensitive crop varieties. This trend has already been seen in Bangladesh. For instance, in case of rice production, farmers are gradually changing their position from the cultivation of the traditional rainfed “Aman” variety to the irrigation dependent “Boro” rice. Considering this changing trend, government of Bangladesh should take measures to identify the climate sensitive crops. It will help the farmers to choose the crop variety more confidently and to generate more revenues from crop production. The crop production policy in the existing National Agricultural Policy (NAP) has emphasized crop diversification in favor of cash crops and crops suitable in the coastal and hilly areas. Among other issues, NAP has also addressed the issue of environmental protection in agriculture emphasizing crop rotation and salt tolerant seed varieties. This paper recommends that along with environmental protection, NAP should also address climate change adaptation issues in agriculture. The recent literature on climate adaptive agriculture in Bangladesh illustrates the different alternative techniques of agriculture, including integrated farming, floating gardens, etc. The literature also emphasizes the efficiency of these alternative forms of agriculture production. These alternative farming techniques need to be highlighted in the NAP, and the NAP should be developed from a “climate change adaptation” point of view so that farmers can be prepared for future climate change events

5.2 Promoting Food Security

Climate change events and natural catastrophes cause great havoc in crop production in Bangladesh. According to the Bangladesh Agricultural Yearbook 2010 (BBS 2012), 113,465 metric tons of Aman rice and 369,591 metric tons of Boro rice were lost due to flood, excessive rain fall and flash flood in 2008–2009 and 2009–2010. Crop switching as a climate change adaptation technique can be used to ensure food security in the country. Being a highly populous country, ensuring food security has been a long standing challenge to Bangladesh. The IPCC estimates that by 2050, rice production in Bangladesh could decline by 8 percent and wheat by 32 percent. In order to avoid this projected decline, climate change adaptation through crop switching can play an important role to ensure food security. Table 3 presents the perception of present level of impacts of climate change on crop in

Table 1: Multinomial Logit Regression of Crop Choice—Dependent Variable: Crop Choice Base crop = Aman Rice

Variables	Aus Rice	Boro Rice	Wheat	Jute	Sugarcane
Sumrain	0.0056	0.0034 ^a	-0.0255	0.0325	0.1831
Sumrainsq	0.0000	0.0000 ^a	0.0000	-0.0002 ^c	-0.0004
Rairain	0.0243 ^a	0.0146 ^a	0.1141 ^b	-0.0722	0.1458
Rairainsq	0.0000 ^a	0.0000 ^a	-0.0001 ^b	0.0001	-0.0003 ^b
Autrain	-0.0402 ^a	-0.0035	0.1423	0.1079	-0.1319
Autrainsq	0.0001 ^a	0.0000	-0.0003	-0.0002 ^c	0.0003 ^b
Dryrain	0.0828 ^a	0.0366 ^a	-0.0998	-0.0594	-0.0645
Dryrainsq	-0.0005 ^a	-0.0002 ^a	0.0007	0.0004	0.0001
Winrain	-0.0075	-0.0740 ^a	-0.2889 ^a	-0.2104 ^a	0.0473
Sprain	0.0280 ^a	0.0746 ^a	0.2822 ^c	0.2593 ^c	-0.1348
Sprrainsq	-0.0002 ^a	-0.0003 ^a	-0.0018	-0.0015	0.0002
Sumtem	-92.9100 ^a	-21.7600 ^a	-40.9400	12.8676	-116.6390
Sumtemsq	1.5991 ^a	0.3486 ^a	0.7089	-0.3401	1.9830
Raitem	56.7000 ^b	-11.0500	319.5800	-136.7650	185.9480
Raitemsq	-0.9990 ^b	0.1950	-5.6170 ^c	2.1613	-3.2120
Auttem	0.2736	1.4500 ^a	6.7000	20.5500 ^a	9.7700
Drytem	-0.1200	-0.6400	-5.3400	-6.9100 ^c	-12.6900 ^a
Wintem	-51.6400 ^a	-31.0200 ^a	-66.6200 ^b	14.1100	-4.1030
Wintemsq	1.2400 ^a	0.7700 ^a	1.6400 ^b	-0.4033	0.3413
Sprtem	81.7200 ^a	36.0400 ^a	56.0200	-97.4300 ^b	134.4200
Sprtemsq	-1.5700 ^a	-0.6864	-1.0300	2.1000 ^a	-2.6800
Agriland	-0.0005	-0.0004	-0.0011	0.0004	0.0053
Operatingland	0.0021 ^a	-0.0020 ^a	0.0030	-0.0040 ^c	-0.0301 ^a
Cropland	0.0005	0.0006	-0.0222	0.0036 ^b	0.0018
Cropproduction	-0.0005 ^a	0.0001 ^a	-0.0028 ^a	-0.0019 ^a	0.0003 ^a
irrMAU	-1.1513 ^a	1.8014 ^a	-0.6877	-0.0288	-0.5753
ferMAU	-1.0719 ^a	-0.9592 ^a	1.0003	0.6811	-0.8090
insMAU	0.6864 ^a	0.0900	-1.1565 ^c	-1.1839 ^b	1.0730
wlabMAU	-0.7405 ^a	-0.0279	1.2504	2.1622 ^a	1.5810 ^c
Fs	0.0803 ^a	0.0139	0.0452	0.1214 ^b	-0.1230 ^c
Housespace	-0.0002 ^b	-0.0006 ^a	-0.0001	-0.0001	-0.0008 ^c
electricityMAU	0.0805	0.0646	0.7055	0.0751	-0.3269
mobileMAU	-0.2665	-0.2271	-0.7906	0.3779	0.4645
yr2005	-2.2430 ^a	0.7792 ^a	-2.3953	-2.2161	-2.0610
yr2010	-0.8511 ^a	1.0915 ^a	-2.2327	-1.0572	-6.7968 ^b
Cons	12.1490	302.5200	-4130.2900	2634.0240	-2704.0990

(^a) indicates 1 percent level of significance.

(^b) indicates 5 percent level of significance.

(^c) indicates 10 percent level of significance.

Table 2: Prediction of Temperature and Rainfall in Bangladesh

	2030	2050	2100
Temperature (° C)			
GCM	+1.0	+1.4	+2.4
Rainfall (% change)			
PRECIS	+4.0	+2.3	+6.7 ^a

Source: MOEF, 2005 and BUET, 2008

^aCorresponds to year 2070

Table 3: Perception of Present Level of Impacts of Climate Change on Crop in the Flood and Flash Flood Affected Areas

Major Changes and Impacts	Crop Loss/Yield Reduction (%)
Soil quality degradation by sand deposition due to bank erosion	10
Improve soil health by deposition of silts	20
Changes in flooding characteristics	30
Changes in cropping pattern with new varieties	15
Damage of Aus and Aman by riverine flood and river bank erosion	30
Damage of Boro rice by flash flood in basin areas	40
Delay in sowing of pulses and vegetables	30
Increased water logged areas	20
River bank erosion causing decrease of cultivable land	20
Increasing incidence of pest and diseases	10

Source: Key experts interviews and workshop for MDG-GED project, 2008 (GED 2009)

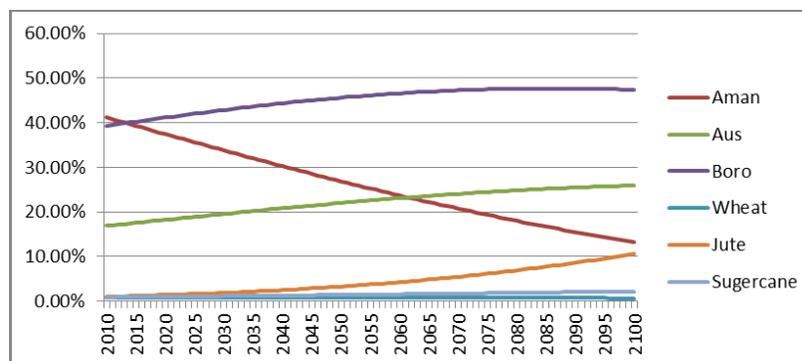


Figure 1: Effect of Predicted Temperature (GCM) on Crop Choice in Bangladesh 2010–2100

the flood and flash-flood affected areas. It is found that different types of climate change events are perceived to lead crop loss from 10 percent to 40 percent.

5.3 Policy Differentiation in Different Agro-ecological Zones

Different land areas of the country are suitable for different crops. The Bangladesh Statistical Yearbook 2010 has listed 30 different agro-ecological zones in Bangladesh. Existence of alluvium in soil of different ecological zones in the country varies from 2 to 98 percent and the clay level varies from 0 to 100 percent. Therefore, crops suitable for adapting to climate change will differ from one agro-ecological zone to another. Therefore, NAP, National Adaptation Programme of Action (NAPA), Bangladesh Climate Change Strategy and Action Plan (BCCSAP) and different sectoral policies should be differentiated for different ecological zones of the country.

5.4 Developing Seed and Fertilizer Distribution and Pricing Policy

Distribution mechanism of agricultural inputs, such as seed and fertilizer should be developed considering the specific types of crops suitable for adapting to climate change in different agro-ecological zones of the country. At present, public and private sectors as well as non government organizations are involved with supplying seeds to the farmers. Government is also providing subsidies for fertilizer and diesel for irrigation. Climate change adaptation can be adopted in the subsidy policy in agriculture. Price mechanism of the agriculture inputs can be developed in such a way so that farmers are induced to climate change adaptation.

6 Conclusion

This paper shows that farmers in Bangladesh change their crop choices in the face of climate change. Examining the major 6 crops of the country, the paper finds that a shift in major crop choices especially in rice varieties will happen in Bangladesh if the climate change scenario is predicted accurately. The strength of the research methodology is that the crop choice data are repeated cross-sectional data from 2000, 2005 and 2010 and the environment data against each crop choice are the average of the last five years. So the data include the past effects of climate change on crop choices. But the environment data used in this paper are from 33 meteorological stations of the country implying that households located in the same meteorological station face the same environmental situation. But, in practice, even inside the same meteorological station, different households may face slightly different environmental situations. Nevertheless, the findings of

this paper indicate a future cropping pattern of the country which has significant policy implications. Therefore, this research also provides the background of how the government should undertake agricultural policy towards different major crop varieties. It is recommended that climate change adaptation through crop switching be adopted in the key agriculture and environment policies in order to ensure a sustainable food security for the country.

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The Journal of Bangladesh Studies (JBS) is inviting academics, experts, and practitioners in various fields to send scholarly papers pertaining to Bangladesh for possible publication. JBS is a peer-reviewed journal and is registered with the National Serials Data Program, Library of Congress (ISSN No. 1529-0905), USA. It is also available at Berkeley, Cambridge, Columbia, Cornell, Illinois, NYU, Princeton, Rice and others institutions of distinction. Recently JBS was released in Bangladesh with the goal of reaching the various academic institutions and research centers.

Articles are encouraged from the fields of anthropology, agriculture, basic sciences, economics, education, engineering, international relations, management, political science, psychology, sociology, and related areas. We seek this diversity of perspective because comprehensive development depends on a broad foundation of knowledge. Broadly, the articles should address Bangladesh's development problems and prospects from a theoretical or analytical perspective prevalent in academic disciplines. Authors are encouraged to prescribe actions and measures that are meaningful, practicable, and amenable to the sector(s) or issues they address. Articles must also be comprehensible to a wide audience. Thus, while technical merit of an article is important, it is even more important that authors are able to communicate lucidly with a variety of readers who may not have the technical sophistication to understand the esoteric methodology of a particular field. In addition, while the articles must be grounded in theory, analysis, and refer-

enced work, they must also communicate outside the specific disciplines of the authors without being perceived as popular, journalistic writing. The articles must be written in APA style provided at the following link: <http://www.library.cornell.edu/resrch/citmanage/apa>.

Both short communications and full-length articles may be submitted. Analysis of recent developments, short reviews of newly published books or research articles, and comments on specific issues are treated as short communications, which should be limited to about 2,000 words. A full-length article, in about 20 double-spaced and typed pages, should provide a reasonable review of the literature and clearly articulate the nature of the problem or issue it addresses as its focus. JBS also invites critiques of published articles to foster debate and discussion. Critiques may be published on the basis of space availability and the advice of the editorial board. Critiques must be about two JBS pages and must be written in a positive demeanor to foster healthy discussion. JBS will attempt to obtain responses from the authors whose articles are critiqued. Please send your manuscripts to:

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NOTE TO CONTRIBUTORS

Journal of Bangladesh Studies (JBS) is a peer-reviewed publication of Bangladesh Development Initiative (BDI). The purpose of the journal is to promote the development of Bangladesh.

JBS is directed at individuals who are interested in development issues. Thus, it should be of interest to a wide audience including academics, students, researchers, policy-makers, administrators, practitioners, donors and

their agents, and others interested in Bangladesh and its pursuit of development.

Articles are solicited from 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, practical, and amenable to the sectors or issues they address. In addition, while the articles must be grounded in theory, analysis, and referenced work, they must also be comprehensible to an audience outside the specific disciplines of the authors without being perceived as popular, journalistic writing.

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Authors must submit their articles first to the editor to initiate the double-blind review process. The author's identification, affiliation, mailing address, and e-mail address should be presented only on the title page. An abstract must also be included with the article. The article must be submitted via email using MS Word.

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