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CONTENTS

Technology vs. Institutions: Towards Institutional Reform in Digital Bangladesh

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Abstract

Information technology for governmental reform has reached a new level of synergy in recent years. Public organizations are rushing to reorganize and adapt to the new technological environment. This paper argues when a rational technological system is institutionalized in terms of becoming the central element that has to be maintained by the organization, the constraints inherent in technology can make institutions less adaptable to social values given the changing demands of society. Since institutions are the embodiment of the public they serve, institutional reform should first deliberate the positive human and social elements within institutions and find ways to utilize technology to improve the public institutions and service to citizens. The paper argues that meaningful institutional reform requires culture to play the central role in refocusing institutional attention towards a deliberative democracy. We should rely on the *actors* themselves who make decisions rather than upon technology that efficiently acts on those decisions.

1 Introduction

Information and Communication Technologies (ICT) are inseparable from government and its operations. Governments are increasingly relying on ICT on a range of issues: from managing large-size projects (building bridges, roads and telecommunications) and routine service provision (bill payments, money transfer, learning about government services) to improve the lives of its citizens. Ubiquitous presence of the internet and mobile connectivity has sparked wider interest in information technology. In addition, the demand for technology in the government has gained momentum because of the prevailing faith in technology that promises to remove bureaucratic barriers and pave the way toward more transparent and citizen-centered public institutions.

With the hope of reaching out to citizens across the nation through broadband fiber optic network, the current Government of Bangladesh has embraced the vision of *"Digital Bangladesh"* that promises its citizens online access to routine governmental services. The initial concerns for ICT-based governmental operation have been about how to widen internet connectivity across agencies for information sharing purposes; however, it has become increasingly clear that such information sharing must also occur with citizens for the sake of strengthening democracy and building public institutions as *public trusts*. Although technology changes the perception of government and its role in the larger democracy towards an apparently more citizen-centric approach to reform, the process by which it occurs is unclear. Even less obvious is how ICT influences institutional norms at the organizational level in developing democracies, particularly where political patronage directly influences formal institutional behavior.

Using the context of Bangladesh this paper argues institutional reform must start through human intervention and social mobilization, and then adapting to the new ICT-based institutional environment. Using social mobilization as the primary toolkit for institutions' social development, the paper argues ICT can be a catalyst in re-energizing democratic ethos through unifying spirit and creating a techno-cultural civilization towards citizen-centric institutional reform.

Using the works of institutional economics and cultural theory, the paper contributes to the theoretical understanding of the role of ICT in public organizations in developing democracies. The first part of the paper distinguishes among goals of the public and the needs facing administrator and highlights areas where technology is most applicable. The second part develops a theory of institutions and technological adaptability and highlights why many ICT-based institutional reforms fail. The third part of the paper is devoted to the theory of culture and the idea that culture is a resource toolkit that can be used for guiding action, particularly to strengthen public trust in institutions. The final section discusses the implication

of information technology in the Bangladeshi context. It concludes with a discussion of how technology can be a powerful mediator for social change.

2 The Theory of Technology Adaptability

The apparent disconnect between information technology and institutional reform in the developing countries is based on the technological determinist agenda that predominantly reifies technically rational business practices to bring about public institutional reform (Heeks and Stanforth 2007). Moreover, what the technology is designed to do and the context under which it is to be applied significantly differ from the situations on the ground. Greater challenge than investment in technology for institutional reform is to change the mindset embedded in people, including the cultural and motivational factors that influence public service activity (Heeks and Mundy 2001, United Nations 2008). The mismatch between technology and context not only makes institutional reform much more challenging but also forces public institutions to compromise democratic values for the sake of expediency and a false sense of technical supremacy (La Porte 1971). The question, therefore, is *"Can ICT have an impact on government? If so, how?"*

Information technology increases the capacity of institutions by efficient transfer of information through digital or wired connectivity. Whereas voice connectivity transfers data in 56 kilobytes per second, fiber optic can transfer more than 100 gigabytes per second or 1.8 million kilobytes per second. The unprecedented speed by which data can be transferred across institutions (G2G), to business (G2B), and on to households (G2C) increase the public institutions' administrative capacity and give governmental institutions a strong advantage for reaching out to citizens. Technology enthusiasts have argued that the information and communication technology will change how government operates. Particularly they argue that ICT will improve the delivery of government service. Indeed rather than standing in lines for driver's licenses or some permits, citizens can make the same request from home or internet café and receive the authorization by mail or online. When the transaction involves governmental authorization or administrative clearance, technology plays an important role in *"supplying"* the *"product"* based on the criteria it sets in the system. However, when the transaction involves governmental decision regarding substantive policies that require value judgments, technology fails the litmus test for executing that responsibility. For example, a retired government official who seeks to receive his/her retirement income through online application may find it convenient to do so. However, what happens on the other side of the electronic portal once the application is submitted may explain the complexity and challenges within a given institutional arrangement.

Filing the required pension documents online completes the first step, and possibly the only step taken by the applicant assuming all other contingencies related to computer and online access, understanding online forms etc. are given. Getting approval may be another matter given the existing institutional arrangements for approval of such a document. First, it will involve the authenticity of the request through evaluation of the documents submitted. Second step will involve policy matters regarding eligibility of the client and notification of the other agencies involved in ensuring available funding. The final step may possibly involve a personal interview with the applicant followed by the approval for the monthly pension fund. In this example we have assumed a perfect world that controls for the *uncertainties* involved in the transaction, for example, not having access to computer or internet, finding someone who can understand what to file, and competent public administrators who are available to execute the responsibilities etc.; and the *cost* to maintain such a system for delivering pensions to citizens. The cost includes the tangible cost of technology as well as the cost to learn the system; and the intangible cost (physical, mental) involved in the process. By overly relying on information technologies' standardized input-and-output we have been forced to control for the uncertainty and the cost that are inevitable in the real world. If technology was really able to control the uncertainty and the cost, legitimizing it for the purpose of serving citizens would be in order. Even though technology is considered an important tool for executing routine actions, it does not change the behavior already embedded in the system. Therefore, an inefficient system can become *"routinely inefficient"* with the power of information technology unless perceptions of the actors who are involved in the process also change. Taking the previous example, the retired citizen seeking pension may find a middleman who can submit the online form on his behalf for a fee. The middleman can subsequently guarantee approval of the pension for another fee (much higher, of course) a similar situation can arise on the receiver side of the electronic portal where the agency clerk withholds the application unless the authenticity of the document is proven with a fee. The middleman analogy can be carried out all the way to the top manager who makes the final decision. In this example the technology has been efficient as expected; however, the system was hijacked by human intervention when the middle-men withheld the information for a fee at different stages and created layers of *"artificial"* authentication. Therefore, the institution failed, and so did the system, that was designed to be executed with responsibility.

If the traditional mode of service delivery in

Bangladesh remains intact then the above scenario does not change even with the most sincere declaration for a Digital Bangladesh. The traditional mode of service delivery in Bangladesh has built in incentives for corruption and rent-seeking behavior (Haque 2002, Heeks 1999). The idea of rent seeking is to benefit from a mutual transaction without making any contribution to the productivity. By virtue of holding an office an individual can exploit their status to earn from any transaction that happens in that office although the person holding the office had no contribution to earn that extra benefit. In order to change the *modus operandi*, there must be significant change within the mindset of the actors (citizens and public administrators) themselves — *"Technology can only bring them closer but the trust must be earned through a mediator and not simply from a medium"* (Haque 2010).

If we overly rely on the power of technology we set ourselves in the dangerous path of letting technology lead the way for some of our substantive decisions. The social value of public institutions is not to maintain an efficient state-of-the-art technological system, but to deliver services to citizens. The technology driven management practices as espoused by Fredrick Taylor work well to manage efficient business practices, however it is in direct conflict with how public institutions should use technology for furthering the value of public service. Hirschhorn (1984) so aptly states, *"Taylorism dampens human creativity by forcing people to tie their skill to technology"* (Hirschhorn 1984, p. 57). Moreover, in a public organization, when a rational technological system is institutionalized in terms of becoming the central element that has to be maintained by the organization, the constraints inherent in technology can make institutions less adaptable to social values given the changing demands of society. Since institutions are the embodiment of the public they serve, I argue institutional reform should first deliberate the positive human and social elements within institutions and find ways to utilize technology to improve the public institutions and service to citizens. For meaningful institutional reform, the central theme is to rely on the *actors* themselves who make decisions rather than upon technology that efficiently acts on those decisions.

Herbert Simon (1986) instructs us:

> "If . . . we accept the proposition that both the knowledge and the computational power of the decision maker are severely limited, then we must distinguish between the real world and the actor's perception of it and reasoning about it. That is to say we must construct a theory (and test it empirically) of the process of decision. Our theory must include not only the reasoning processes but also the processes that generated the actor's subjective representation of the decision problem, his or her frame." (Simon 1986, p. S210–211)

3 Public Institutional Reform

Institutions are the primary vehicles by which a government executes citizen mandates and exercises its authority to preserve the democratic rights of its citizens. I take the approach that the purpose of institution is *"the embodiment of public purpose"* (Selznick 1957). When institutions fail to fulfill their purposes, institutional reform is called for in order to meet those obligations.

The philosophical debate about the purpose of institutions can be distinguished into two broad categories based upon a distinction of the normative and rational reasoning for the purpose of institutions in a democratic society. Following the normative arguments by Rawls (1971) and Jürgen Habermas (1998), institutions ought to run on the precept of political justice — a term that can be defined as an end result of a political compromise (through cooperation) among citizens and government. The first encounter of citizens with government is through public institutions. If these institutions fail to operate under the principles of political justice, citizens will clearly be ambivalent about relying on institutions and will find other means to seek political compromise. In contrast to the normative view of institutions, the institutional school of economics argues that citizens rely on institutions to minimize their transaction cost. Transaction cost refers to the cost of uncertainty in the transaction outcome and the information cost of the exchange that makes transaction valid under the given law of the land (North 1993/1998). In a perfect world, institutions serve as neutral intermediary with minimum enforcement cost due to its effectiveness. However, because of formal laws (constitutional and legally binding) and informal constraints (customs, traditions and culture), institutions vary from country to country. According to Douglas North 1990, *"the major role of the institution in a society is to reduce uncertainty and [establish] a stable (but not necessarily efficient) structure of human interaction"* (p. 6). North also affirms that institutions play a very important role for economic empowerment because they *"form the incentive structure of a society and the political and economic institutions, in consequence, are the underlying determinant of economic performance"* (North 1993/1998, p. 250). Clearly institutions have a significant impact on society, particularly on how government interacts with its citizens. In order to change institutions we must first know beforehand: change for what?

Institutions not only embody public purpose but also, over time, emanate a fundamental value to society in the form of trust. Relying on this trust, institutions become the gatekeeper of a government and its services to its

citizens. With active mutual interaction between institutions and citizens, institutions act as tools to achieve certain objectives. For example, getting a land permit (to own land) or paying property taxes (to receive neighborhood services), citizens rely on these tools to get the job done. Unlike owning a tool, such as a hammer or computer to get the job done, citizens rely on the tools owned by the government. This becomes problematic as the *"tools"* become aware of their *"power"* and, without formidable checks from external stake-holders, can engage in rent-seeking behavior (Krueger 1974). Any fundamental change in institutions must also address the way to change the informal behavior of the institutions. As North argues, *"any fundamental long run source of change is learning by individuals and entrepreneurs of organizations"* (North 1993/1998, p. 4) and that *"institutions are created by human beings. They evolve and are altered by human beings"* (North 1990, p. 5). In other words how to change a routine operation becomes the formidable task for reforming institutions. The question is not how to avoid using technology but how to use technology in ways that can instill and institutionalize positive behavior within public institutions.

4 Institutional Design in IT: The Human Framework

4.1 The Principal-Agent Model

For technology to have any impact on institutions, we must address the role of the actors and their relationship to each other. The public administration institution in Bangladesh is rooted in a tradition of serving the sovereign — the superior master instead of the citizenry (Haque 2002). The bureaucracy in Bangladesh has the remnants of a legacy established by British rule in India where public administrators were primarily involved in collecting taxes from the peasantry. This grew under the impression that public administration is primarily the servant of the political regime and the citizenry are to be ruled by bureaucrats for generating revenue for the master (mother country). After the British left the Indian soil, public administration remained subservient to the local Governors (*"Nawabs"*) and landlords of the regime. Later in the absence of a foreign regime, public administration was expected to serve the interest of the political masters. Clearly after the independence of Bangladesh, the politicians exploited the strength and maturity of the bureaucratic regime to protect their own political interests and aligned with bureaucrats for private gain (Monem 2006).

Using the principal-agent theory we can gather further insight into how technology can play an important role for institutional reform. According to principal-agent theory, in a traditional hierarchical institutional structure, the superior as the principal polices its subordinate agents to ensure that they maximize the principal's interests. We assume that the principal has the power of disciplining the agent and hence enforcing agreements. The principal here is used to denote the head of the department or chief administrative officer and should not be confused with earlier example of a politician as the master. Enforcement cost is minimal when both parties agree on the goals of the institution. Failure to see eye-to-eye will logically lead to greater cost for enforcement and policing the agent than if both are in consensus. The cost of institutional reform therefore will be determined by the differences in principal-agent attitudes towards each other and the institutions they serve. The positive supervisor-subordinate relationship can be shaped by the organizational environment or culture often triggered by a common set of values. I argue that the values generated by Bangladeshi culture can be powerful symbols that act as an informal constraint and reduce the cost of enforcement. This is not unusual. Many of the Far East countries including South Korea, Singapore, and Malaysia have used an inner spirit of nationalism to bring institutional reform. According to Rostow (1971) whose work on stages of economic growth has been well received in developing countries argues, *"[S]tages of economic growth do not infer on economic interpretation of politics, rather it is the primacy of reactive nationalism over any other motives that drive nations for economic change"* (p. 24).

4.2 Culture Framework

Ann Swindler in her seminal work on Culture in Action (1986) argues that culture *"is more like a style or a set of skills and habits than a set of preferences or wants"* (p. 275) that people can acquire by being part of a society. Swindler argues that our actions are not guided by our values; rather *"action and values are organized to take advantage of cultural competence"* (p. 275). In other words cultural patterns provide the structure that individuals use to develop particular strategies to achieve a certain goal. For example, individuals have used marriage as a strategy to move up to higher ranks in the society (Bourdieu 1977). Strategies are a general way of organizing our actions based on available cultural tradition. Culture is like a toolkit that individuals utilize to select differing pieces for organizing a line of action. People living within a cultural tradition all have a good understanding of the culture. They use their culture as a source to adapt to circumstances. What endures over time is not ones interest driven by a set of values but the *style or line of action* by which one attains the end.

The argument here challenges Max Weber's notion that culture plays an important role in influencing outcomes. Rather *"culture provides the materials from which*

individuals and groups construct strategies for action" (Swidler 1986, p. 280). Culture is a resource that shapes action, not determines its end. In new democracies ideologies play the dominant role in controlling action, and competing cultural views create new modes of action. In developed democracies culture is a melting pot with varying cultures encapsulated into one. It has weaker control over action. However, the skills and habits are routinized as if they are common sense and habitual.

4.3 Culture as Resource Skill: The Bangladeshi Context

Bangladesh is a nation of a long cultural heritage. It is the only country in the world that used the native language (*Bangla*) as a civil rights struggle that led to the independence of the country from Pakistan in 1971. February 21, 1952, was the day when many students were killed because they protested making Urdu (Pakistani language) the national language. A short time ago, UNESCO declared February 21 as the International Mother Language Day that is observed annually throughout the world. The Bengali language is the fifth most-spoken language in the world. Until today the nation has been governed by leaders who seek legitimacy in the predicament of a deep rooted heritage connected to the liberation war of 1971. The Prime minister chair has revolved around two leaders (Sheikh Hasina and Khaleda Zia) both connected via direct family members who were directly involved in the liberation of the country. In the last 40 years, more than 30 years have been ruled by one of the two leaders.

Today the war of independence is part of the cultural tradition beyond mere patriotic symbolism. The nation takes pride in its cultural roots, particularly its independence from Pakistan, and the population in general empathizes with such sentiments. The young and new generation, even though never part of the independence movement, has overwhelmingly embraced that tradition. In recent years there has also been a revival of cultural traditions. The traditional clothes, handicrafts, and folk songs that were once regarded somewhat as relics of the past are now appreciated as a part of the modern culture. Despite the fact that an overwhelming majority of the population is Muslim (more than 80%), most people maintain a cultural identity that has roots in the Hindu religious tradition. Culture is often used to shore up support for a cause, to fight against injustice and even to topple oppressive regimes. (Recently a Bangladeshi film-maker who was renowned for making a film based on the Liberation war died on a road accident. That sparked a mass movement against road accidents and bad road conditions in Bangladesh.)

Culture is a resource and strength for a nation. However, for culture to have any effect on action it must be stable, implying it does not give conflicting messages for action. The last 40 years in Bangladesh has been a relatively unsettled cultural period where differing ideologies have competed, making it difficult for one culture to have substantive impact on people's actions. After passing through troubled political periods and economic downturns in the last 40 years, there has emerged a distinct cultural identity and a sense of ownership of the Bengali culture that touches the full spectrum of the society. At the global level Bengali culture has set its mark, particularly through the work of the Grameen Bank pioneered by Noble Laureate Professor Mohammad Yunus. The BRAC organization in Bangladesh leads the way as the world's largest nonprofit organization using innovative method of alleviating poverty in Tanzania, Uganda, Haiti, Afghanistan and Central Asia (Bornstein and Davis 2010, Davis 2011, The Daily Star 2011, Waldman 2003).

Evidence suggests that Bangladesh has been culturally stabilized to guide action towards empowering the marginal class. The culture is settled and has developed its own ethos for the citizens. It is prime time for the new generation to utilize the cultural resource to direct action in ways that will improve institutions. Aided by the proliferation of mobile telephones and the internet revolution, culture is an asset to be used to complement information and communication technologies. Public administrators can use cultural competency to fulfill expanded social responsibility for creating social value. Technological process will be an outcome rather than a cause for the establishment of new social relations to build trustworthy institutions in Bangladesh.

4.4 Use Technology Where It is Needed

Investing in ICT is a costly enterprise for government. Disaster is imminent when there are unrealistic expectations as to how technology will mediate within the existing social and institutional infrastructure. According to Goldfinch (2007) most information technology projects in government die before they are launched and the success rate is less than 26% percent (p. 917). In the United States for example, a staggering US $150 billion dollars is wasted for IT investments that fail and another US $140 billion in the European Union (Goldfinch 2007, p. 918). Yet, surprisingly, the rising cost of failure does not appear to dampen the enthusiasm in IT investments. As noted by Goldfinch (2007), *"the overblown and unrealistic expectations that many have regarding information technology"* continue to overshadow the failures of IT investments in the public sector (p. 918). Developing countries do not have the luxury to tinker with technology; however, to compete for international donor assistance, and more so, for political gain, they follow-suit with proposals that are competitive and attractive to donor standards.

With rising optimism regarding technology and modernity, the socioeconomic and political barriers for implementing such plans are often overlooked, if not undermined. Policy planners ought to follow sound and prudent ICT investment practices. As argued below, technological demands are often incompatible with public institutional goals and values.

Adapting technology to any given institution is a complex and often confusing business. Technology, as an entity, seeks conformity through standardization and control under a stable environment. Public institutions neither produce standardized output nor work under a stable environment. For institutions to adapt to technology and realize its benefits (efficiency, productivity) they must create a system that (1) standardizes what it produces, (2) controls the environment and, (3) monitors changes on a continuous basis. With available resources such plans are theoretically feasible and often workable under private sector agreements. Public institutions will often fail to fulfill the three conditions of technological adaptability.

The relationship between technology and institution can be described using the work of Thompson and Bates (1957). They lay the foundation to describe where technology would be most applicable given the institutional goals and the means (including administrative arrangement and human skills) by which it can attain them. Institutions having objective and quantifiable goals, and capable of adapting to a changing environment, can maximize technology use. On the other hand, if the goal is subjective and non-quantifiable, technology usage is limited given the cost of re-tooling technology and human skills. In extreme cases such re-tooling not only will be costly but also dangerous because the ends are vague, undefined, and uncertain. It is not surprising then why 70 percent of government technology projects often fail (White 2007). Wrong assessment of technology and human skills is most often blamed, but the problem is more with the decision to depend on technology to solve the problem. A business explanation is found here (Goodman 2009).

Successful technological adaptation depends on how well institutions have been able to define their goals and how well they have been able to match the type of technology to achieve those goals. One of the fundamental requirements to maintain the rational relationship between goals and technology is the type of workforce that have to be matched to work under the changing institutional external environment. Figure 1 describes a schematic diagram of technology adaptability and institutional goal in a continuum space.

Figure 1 suggests that technology is most suitable when goals are objectively defined and when technology and humans can be retooled within the changing environment (See quadrant I, PV). Tangible commodities produced in the private sector can be tailored with technology to produce the goods and services. Goods that are the products of nature can be privately owned and produced efficiently but cannot be artificially reproduced. Here technology can be adopted for efficiently managing the products including excavation or harvesting, delivery and packaging (See quadrant IV, PV/). Private and government sectors both are involved in making use of technology in this area. Some are highly controversial around the issue of using technology to tinker with nature.

The left hand side of the diagram (quadrant I and III) deals with products that are value based. Value based products can be defined as products that require collective value judgments in order to produce them or to *"commodify"* them. Commodification is giving meaning to a value-based concept through habits and narratives (Latour 2005, Thompson 2010). For example, the goal to reduce poverty or improve the quality of life can be discussed as to how to obtain that goal. Empowering women can be a way of commodifying reduction of poverty. Technology can be applied when vague objectivity can be comodified so that the end can be defined. When solutions require a value judgment, the use of technology is not only problematic but misleading and dangerous. There are products where technology is adaptable, but collective value judgment is required regarding its allocation due to high fixed cost and free-rider problem (individual using it but not paying for it).

With regard to human skills the above scheme is very instructive. When technology is adaptable regardless of objective or subjective goal (upper two quadrants), high technical skill is required to produce and manage such products. Retooling of skills is continuous, and innovation and adaptation to new technology are requisites. In contrast, when a goal is value-based, technocrats are needed less, and the challenge demands value-based skills of professionals with high ethical standards, leadership skills, social skills, and deep commitment to democratic values.

Using the logic of goals and adaptability to technology as described above we can argue that technology usage in public institutions should be based on how well the *"product"* can be defined by the collectivity. If a public institution's product cannot be defined or generally agreed upon by the democratic polity, we should be wary about the role of technology in those institutions. This should be instructive for developing countries in particular because they are in a unique position to start afresh after learning from the early starters in the industrialized world. The type of technology that dominate public institutions in the developed world is based on flow concept borrowed from business and manufacturing sectors. Enterprise Resource Planning (ERP) is a widely used business management

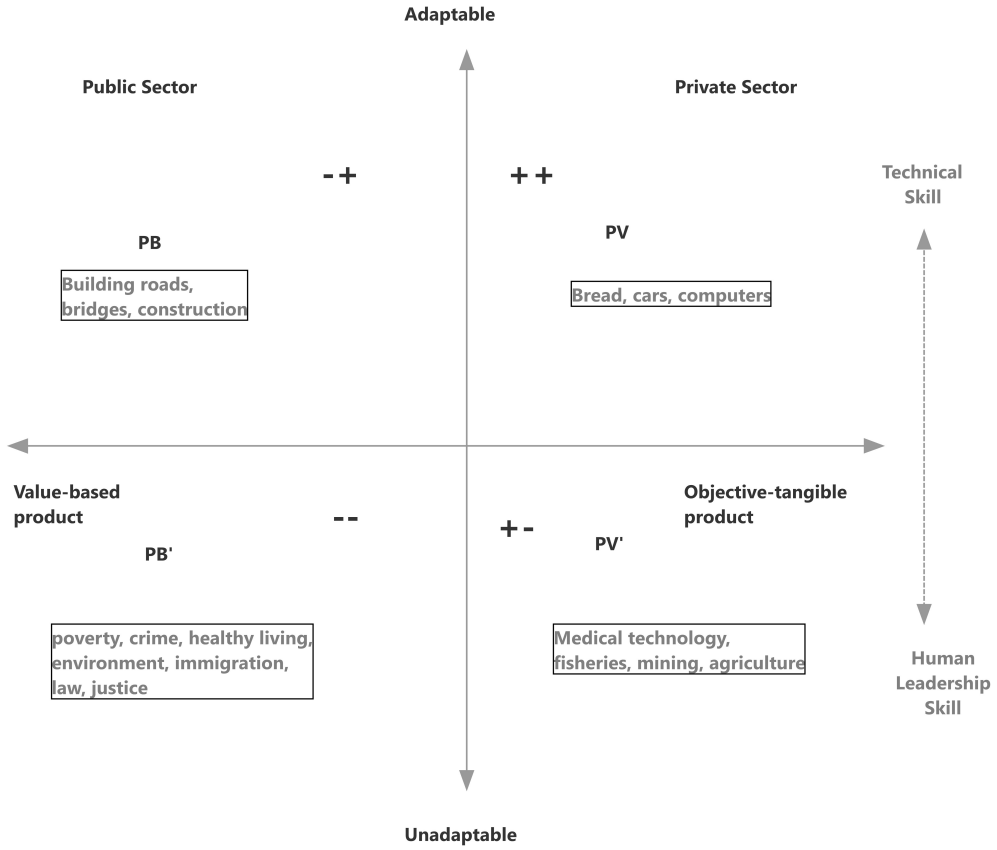

Figure 1: Institutional goals and technology adaptability space. The schematic diagram is based on arguments by Thompson and Bates (1957). More details can be found in Haque (2015).

software whose main goal is to streamline large organizations' administrative and policy directives by linking every department under one enterprise. The E-Government movement reinforced the use of ERP through Business Process Re-engineering (BPR) and Customer Relationship Management (CRM) models. As of 2011 almost all federal agencies in the US are part of the ERP and almost all state governments have migrated to one form of ERP system. There appears a global movement towards integrated business management practices in government using work flow management software such as ERP.

Public institutions that are not in the business of delivering products should be careful about how they utilize information technology and their practices. Thus Ministry of Land Development or Telecommunication will have very different technology implications than the Ministry of Social Welfare.

5 Implications and Conclusion

Institutions should not be seen as tools or technocratic power hubs where transactions take place between citizens and government to get things done. Profit from holding a government office (exemplified in corruption) is predominant within institutions that maintain such practices. The current principal-agent, or more practically, master-slave mentality, among government and its citizens does not help the people of a nation, even with the most advanced state-of-the-art information technology. Information technology can be the enabler of trust when culture is used as a resource to bind citizens and government towards a common goal. As mobile technology becomes common place, it can enable culture to be the resource, for guiding action towards a truely liberated democracy.

I reaffirm that Bangladesh's investment in ICT should be encouraged. However, this must not be done to make institutions more powerful, as argued earlier, but to make agency the deliberators of shared values to its citizens. How are values deliberated to citizens through information technology? The recent example is the Ministry of Education that released all public school textbooks in e-book format and delivered online (See *http://www.ebook.gov.bd/*). Free public education is a policy that is expected to educate its citizens, but free e-

books in the hands of the citizens is the direct *action* for improving education. Even in many prosperous parts of the industrialized world this is not a reality given corporate interests. The Ministry of Agriculture through its Agriculture Information Service (AIS) provides hands-on knowledge and skills and timely information to farmers through multi-media and interactive web-based tools (*http://ais.gov.bd/*). These web-based applications are not transactions with citizens to provide license tags or land permits but deliberative actions that communicate to its citizenry. All Ministries in Bangladesh should be building at least one signature deliberative act that connects to its larger community.

Corruption is not a Bangladeshi governmental value; it is a mind-set drawn from routinized behavior of institutions. Bangladesh must prepare for a *"cultural shock"* or a *"cultural tsunami"* in order to revive its cultural ethos and reclaim the *Bengali identity*. This will come from the people who must demand that corruption is not part of the Bangladeshi culture, rather a behavior of corrupted minds. It must be uprooted by hating the act that has no corollary in the rich heritage of the *Bangla* culture. Information technology can play a fundamental role, and so can the young generation of Bangladeshis who have embraced a Digital Bangladesh.

According to Lindstedt and Naurin (2010), reforms focusing on increasing transparency should be accompanied by measures for strengthening citizens' capacity to act upon the available information if we are to see positive effects on corruption. This is also supported by Fung, Graham and Weil (2007) who argue that information by government passed on to citizens for the sake of being more transparent must take into account as to how the new information can be easily embedded into the routine of the information users — the citizens. Again, as an example, information on a website about the potential hazards of arsenic contaminated water will do nothing to save a village whose daily routine is centered on using the contaminated water. Without an alternative water source conveniently accessible to the villagers (to the extent that it becomes part of their routine), information about the hazard is of little value. Information must stand on tacit knowledge of improving the capacity of citizens to understand the information. In other words it must be contextualized to the routine of a citizen. To imagine a prosperous future is to prepare for it and build action towards its realization (McCurdy 1995, p. 504). In other words it must be contextualized to the routine of a citizen Haque (see 2015, chapter 3):

> "[T]he empirical reality of *"good"* public administration may arise from the same societal values that shape policies. Society may recognize good administrators as those people who skillfully promote dominant ideals. Someone skilled in promoting competition would be a good manager in a society that valued rivalry, as in a market economy. The same manager would seem out of place in a society more oriented toward cooperation. Each system of administration could prove successful in its own setting since each would appeal to values that its participants recognize."

References

Bornstein, D. and Davis, S. (2010), *Social Entrepreneurship: What Everyone Needs to Know*, Oxford University Press, New York.

Bourdieu, P. (1977), *Outline of a Theory of Practice*, Cambridge University Press, Cambridge, U.K.; New York.

Davis, S. (2011), 'Letter From Uganda: Given the Tools to Fight Poverty, Africa's Women Tend to Win', The Huffington Post, October 29, Retrieved from http://www.huffingtonpost.com/susan-davis/letter-from-uganda-given-_b_1025948.html.

Fung, A., Graham, M. and Weil, D. (2007), *Full Disclosure : The Perils and Promise of Transparency*, Cambridge University Press, Cambridge; New York.

Goldfinch, S. (2007), 'Pessimism, Computer Failure, and Information Systems Development in the Public Sector', *Public Administration Review* **67**(5), 917–929.

Goodman, J. H. (2009), *The Optimal Reference Guide: Why 70% of Government IT Projects Fail — Quality Project Management for Education Agencies, Project Management Series – Part I: Extraordinary Insight into Today's Education Information Topics*, second edn, ESP Solutions Group. Retrieved from http://www.espsolutionsgroup.com/espweb/assets/files/ESP_QPM_ORG_revised.pdf.

Habermas, J. (1998), *The Inclusion of the Other: Studies in Political Theory*, MIT Press, Cambridge, MA.

Haque, A. (2002), 'Political Economy of Corruption in Public Office in the Indian Sub-Continent: A Historical Perspective', *Politics Administration and Change* **38**(2), 53–65.

Haque, A. (2010), Breaking the Bureaucratic Inertia: E-Government, Civil Society and Mobilizations of Citizens in Bangladesh (Chapter 8), *in* E. Downey, C. D. Ekstrom and M. A. Jones, eds, 'E-Government Website Development: Future Trends and Strategic Models', IGI Publishers, Hershey, PA, pp. 117–129.

Haque, A. (2015), *Surveillance, Transparency and Democracy: Public Administration in the Information Age*, University of Alabama Press, Tuscaloosa.

Heeks, R. (1999), *Reinventing Government in the Information Age. International Practice in IT-Enabled Public Sector Reform*, Routledge, New York.

Heeks, R. and Mundy, D. (2001), Information Systems and Public Sector Reform in the Third World, *in* W. McCourt and M. Minogue, eds, 'The Internationalization of Public Management', Edward Elgar, Cheltenham, UK, pp. 196–219.

Heeks, R. and Stanforth, C. (2007), 'Understanding E-Government Project Trajectories from an Actor-Network Perspective', *European Journal of Information Systems* **16**(2), 165–177.

Hirschhorn, L. (1984), *Beyond mechanization: Work and Technology in a Postindustrial Age*, MIT Press, Cambridge, MA.

Krueger, A. (1974), 'The Political Economy of the Rent-Seeking Society', *American Economic Review* **64**(3), 291–303.

La Porte, T. R. (1971), 'The Context for Technology Assessment: A Changing Perspective for Public Organization', *Public Administration Review* **31**(1), 63–73.

Latour, B. (2005), *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford University Press, Oxford.

Lindstedt, C. and Naurin, D. (2010), 'Transparency is not Enough: Making Transparency Effective in Reducing Corruption', *International Political Science Review* **31**(3), 301–322.

McCurdy, H. (1995), 'Fiction and Imagination: How They Affect Public Administration', *Public Administration Review* **55**(6), 499–506.

Monem, M. (2006), *The Politics of Privatization in Bangladesh*, Osder Publications, Dhaka.

North, D. (1993/1998), "Economic Performance through Time," lecture delivered in Stockholm, Sweden, upon receiving the Alfred Nobel Memorial Prize in Economic Science, *in* M. C. Brinton and V. Nee, eds, 'The New Institutionalism in Sociology', Russell Sage Foundation, Chicago and London.

North, D. C. (1990), *Institutions, Institutional Change, and Economic Performance*, Cambridge University Press, Cambridge; New York.

Rawls, J. (1971), *A Theory of Justice*, Belknap Press of Harvard University Press, Cambridge, MA.

Rostow, W. W. (1971), *Politics and the Stages of Growth*, Cambridge University Press, Cambridge, England.

Selznick, P. (1957), *Leadership in Administration*, Harper & Row, New York.

Simon, H. (1986), Rationality in Psychology and Economics, *in* R. M. Hogarth and M. W. Reder, eds, 'Rational Choice', The University of Chicago Press, Chicago and London.

Swidler, A. (1986), 'Culture in Action: Symbols and Strategies', *American Sociological Review* **51**(2), 273–328.

The Daily Star (2011), 'The Fight Against Extreme Poverty Pays-off', The Daily Star, October 26. Retrieved online http://www.thedailystar.net/newDesign/news-details.php?nid=208032.

Thompson, J. D. and Bates, F. L. (1957), 'Technology, Organization, and Administration', *Administrative Science Quarterly* **2**(3), 325–343.

Thompson, P. (2010), Commodification and Secondary Rationalization, *in* T. Veak, ed., 'Democratizing Technology: Andrew Feenberg's Critical Theory of Technology', State University of New York Press, New York, pp. 112–135.

United Nations (2008), 'United Nations e-Government Survey 2008: From e-Government to Connected Governance', United Nations, New York. Retrieved from: http://unpan3.un.org/egovkb/portals/egovkb/Documents/un/2008-Survey/unpan028607.pdf.

Waldman, A. (2003), 'Helping Hand for Bangladesh's Poor', The New York Times, March 25, Section A, Column 1, Page 4.

White, J. D. (2007), *Managing Information in the Public Sector*, M.E. Shape Inc., New York.