A Transaction Cost Analysis of the Statutory Audit in Bangladesh. An Analysis

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Abstract: Democratic and managerial accountability are two defining criteria of good public financial management in democracies. The statutory audit conducted by a Supreme Audit Institution is the universal practice to ensure such accountability. The statutory audit arrangement in Bangladesh is a case study of transaction cost economizing governance structures. This paper argues that a general theory of statutory audit is necessary to explain variable practices and improve the current system in a given context. Transaction cost economics, a conceptual framework that differs from New Institutional Economics (NIE) and old institutionalism, focuses on explaining the institutional environment and institutions as governance. Transaction cost economics focuses on reducing moral hazard and information asymmetry among transacting parties in transactions. The paper has demonstrated that transaction cost economics has the potential to explain almost all critical aspects, such as independence, efficiency, and effectiveness of statutory audits, and develop general principles for designing better statutory audits. The study has shown that intelligent private ordering is necessary to make transactions easy in Bangladesh, and transaction cost economizing governance structure could be designed in every audit independence, accountability, efficiency, and effectiveness process.

KeyWords: Financial Administration, Statutory Audit, Transaction Cost, Institutional Environment, Governance

I. Introduction

Transaction cost is a conceptual framework that differs from New Institutional Economics (NIE) and old institutionalism. NIE views a firm as a production function insulated from the environment and a technology-guided process controlling the production function. It argues that the environment critically affects the production function, and technology governance significantly influences the outcome the technology produces. Transaction cost differs from other streams of NIE, such as agency theory and game theory, in that it focuses on explaining the institutional environment and institutions as governance. In Bangladesh, a statutory audit is a nebulous academic spectrum with little indigenous knowledge.

A general theory of statutory audit could provide general principles for explaining veritable practices across countries and guide audit policy-makers and regulators in governing the audit profession. Transaction cost economics focuses on reducing moral hazard and information asymmetry among transacting parties in transactions. The discriminating alignment hypothesis suggests that each transaction has its own distinctive aligned governance structure based on unique attributes of the transaction itself. Economizing transaction costs

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is central to this hypothesis, as contracting is costly in negotiating, writing the terms of the arrangements, monitoring the contracting party's performance, and enforcing the contracts. The selection of the most economical alternative governance structure depends on the dimensionalization of transactions (cost determinant) and the corresponding dimensionalization of governance structures (cost economizing). Williamson (1991) identified four parameters for dimensionalizing transactions: contract law, frequency, asset specificity, and uncertainty. Contract law is of three types: classical, neoclassical, and forbearance. Frequency attached to significant damage reduces autonomy, while uncertainty in a transaction means that complete contracts cannot be foreseen, and parties making the specific investment are disadvantaged when future contingencies impose to re-negotiate the contract terms.

The statutory audit arrangement in Bangladesh is a case study of transaction cost economizing governance structures. The audit process bears considerable transaction costs, which can be measured through the budget allocation of the OCAG and allocation earmarked for other ministries for audit settlement purposes. The Discriminating Alignment Hypothesis suggests that designing transaction-specific transaction cost-economizing governance structure is possible. The specificity of the transaction depends on asset specificity, uncertainty, and frequency. Bangladesh's audit settlement process is complex and lengthy, causing soaring transaction costs. Transaction cost economics has the potential to explain almost all critical aspects, such as independence, efficiency, and effectiveness of statutory audits.

II. Transaction Cost: A Conceptual Framework

Differentiating New Institutional Economics (NIE), of which transaction cost is an offshoot from neoclassical economics and old institutionalism worth noting. While the latter views a firm as a production function insulated from the surrounding environment and a technology-guided process controlling the production function, the former argues that the environment has a critical effect on the production function, and the governance of the technology significantly influences the outcome the technology is supposed to produce. NIE is thus akin to the General Systems Theory (GST) of the organization (Thompson, 2007; Kast&Rosenzweig, 1973) with fundamental differences in that GST focuses on interdependence itself and minimizing such dependence, while NIE deals with efficient interdependent outcomes notwithstanding the degree of interdependence.

NIE contends with the old institutionalism by arguing that institutions are susceptible to analysis while both recognize that institutions matter (Matthews, 1986). The institutional analysis enabled administration specialists to explain why some institutional forms, though successful in some places and times, fail in many others and develop prototype institutions for varied contexts and track down deficiencies in existing prototypes when they arise.

Transaction cost also differs from other streams of NIE, such as agency theory and game theory, in the fact that the latter is concentrated on explaining the institutional environment, i.e., the rules of the game. At the same time, the former makes on the institutions as governance, i.e., the play of the game. Institutional rules of the game include history, experience, customs, laws, politics, and enforcement characteristics (North, 1986). In contrast, the play of the game or transaction cost approach is much more microanalysis. It focuses on the comparative efficacy of alternative generic forms of governance models in economizing transaction costs (Williamson, 1991).

2.1 What is a Transaction?

Commons defined 'transaction' as "the ultimate unit of activity ... must contain in itself the three principles on conflict, mutuality and order" (Commons, 1932, p-4). Parties involved in the transaction differ in their interests (conflict). However, they are likely beneficial if the transaction happens (mutuality). Some disciplinary measures should surround the transaction process so that each party is forced to play according to the game's rules. Thus chaos and disorder disappear for future transactions (Order). This last characteristic, i.e., order, is the lifeline of transaction cost's governance function by which order is restored, thereby conflict minimized and mutual gains secured. This transaction is the second-order activity of the firm following the first-order activity, i.e.,

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production. Though classical and neoclassical economists do not wipe out the importance of transactions, they assumed it was a costless process and considered it needless to analyze (Williamson, 1989).

Transaction cost, on the contrary, considers transactions costly and sometimes costlier than production cost itself, ending up with no production decision. The foundation of such differing views lies in contradictory assumptions of the nature of the human beings that the two streams hold. The holders of the view of firm-as-production function assume "that human actors are impressively endowed with cognitive competence (approximating unbounded rationality), are given to simple self-interest seeking, and that disputes are costlessly settled by the courts (i.e., public order)" (Williamson, 1998). On the other hand, those who see films-as-governance humans are limited in cognitive ability (bounded rationality), engage in subtle self-interest seeking (opportunism), and that disputes are dealt with through a variety of private ordering mechanisms and courts and other forms of public ordering are the last resort (Williamson, 1998). Bounded rationality and opportunism rivet complex transactions with uncertainty, making transaction possible only after incurring considerable cost in the form of information gathering about other parties involved in the transaction, bargaining for chalk out contract for the transaction, monitoring the compliance, and enforcing it in case of violation (Baker & Hubbard, 2001). Transaction cost theory helps identify the transaction cost economizing governance model for a particular transaction.

2.2 The Nature of Transaction Cost Governance Design

2.2.1 Governance is an Ex-Post Intervention

Transaction happens between parties within an ex-ante institutional environment (e.g., rules, customs, history, enforcement) upon certain conditions (e.g., price, interest, rent, barter). For example, buyers and sellers transact goods/services at a compatible price under the goods/service trade laws. It is assumed that if either of the parties breaks the law, s/he could only be brought to book with incurring costs of the already lost transaction, evidence generation, investigation, and prosecution. Such unexpected behavior appears due to bounded rationality and opportunism of the parties involved. Ex-post effects of ex-ante environmental arrangements should be avoided; some governance forms are applied to gather information about the reliability of the parties, bargain a contract and monitor and enforce it. Figure 1(Williamson, 1997) shows the relationship between individuals in the transaction, ex-ante institutional environment, and ex-post governance. The institutional environment influences individual preference to choose from alternative behaviors-comply or digress, exchange or cease, etc. Ex-post governance arrangement restricts opportunism. The institutional environment shifts parameters that determine features of the governance mechanism. Specific governance mechanisms might set parametric limits for bringing change in an institutional environment. For example, a warranty is a governance mechanism in selling consumer durables that reduces the transaction cost of the customers in knowing sellers before buying within an environment of trading laws and marketing campaigns.

2.2.2 Private Ordering/Contract

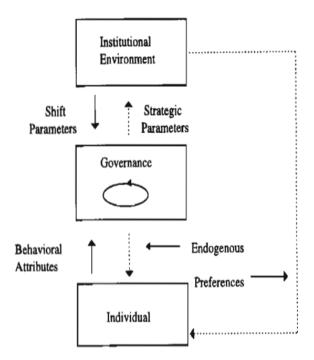
Neoclassical economics flourished under property rights created by law and its enforcement through the court system. The transaction has become even more complicated with the emergence of a more complex production process. A contract regime, complementary to property rights, facilitates complex transactions through adjustment, bargaining, termination, compensation, arbitration, and other modes of private ordering, with litigation (public ordering) as a last resort (Galanter, 1981).

2.2.3 Contractual Moral Hazard from information asymmetry

Transactions are beset with moral hazard. Parties involved in a transaction may conceal their true intention and price-sensitive information before contracting and behave deviated in bilateral interdependency after contracting (Williamson, 1997 and 1985). Such moral hazard stemming from information asymmetry leads to adverse

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selection during contracting, often defeating the purpose. The governance system advocated by transaction cost economics is supposed to limit moral hazard by reducing information asymmetry among the transacting parties.



2.2.4 Discriminating Alignment Hypothesis

The discriminating alignment hypothesis in transaction cost argues that each transaction has its own distinctive aligned (viz. transaction cost economizing) governance structure based on unique attributes of the transaction itself (Williamson, 1991). Economizing transaction costs is central to this hypothesis as contracting is costly in negotiating, writing the terms of the arrangements, monitoring the contracting party's performance, and enforcing the contracts. Selection of the most economical alternative governance structure, therefore, depends upon the dimensionalization of transactions (cost determinant) and the corresponding dimensionalization of governance structures (cost economizing) (Williamson, 1979). Williamson (1991) identified four parameters for dimensionalizing transactions: contract law, frequency, asset specificity, and uncertainty.

Contract law is of three types: classical, neoclassical, and forbearance. Classical contract law applies in transactions where information asymmetry is the lowest, i.e., parties are autonomous, can foresee most contingencies, and measure performance. The identity of the parties is irrelevant in such a transaction. Contract law is interpreted in a very legalistic way in more formal terms and is strictly enforced. Neoclassical contract law also applies to autonomous parties but relieves them from strict enforcement. However, autonomy is constrained by bilateral dependency to a nontrivial degree. Identity matters if premature termination or persistent maladaptation would place burdens on one or both parties. As a burden may be incurred, a neoclassical contract requires arrangements to adjust and disclose information and substantiation in favor of compliance and arbitration if the voluntary agreement fails. The last sort, forbearance, applied to parties internal to an organization and placed in the hierarchy. Parties to an internal dispute have deep knowledge about the circumstances surrounding a dispute and the efficacy of alternative solutions, and permitting internal disputes to be appealed to the court would undermine the efficacy and integrity of hierarchy.

The frequency of transactions may be one-time, occasional, or recurrent. A frequent transaction (especially in the presence of specific assets) is more likely to be internalized (Williamson, 1979) since the expected damage from

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opportunistic behavior is significant. Frequency attached to great damage reduces autonomy. Uncertainty in a transaction means that complete contracts cannot be foreseen, and parties making the specific investment are disadvantaged when future contingencies impose to re-negotiate the contract terms. Transaction cost theory individualizes two kinds of uncertainty: environmental uncertainty, which is the unpredictability of future contingencies, and behavioral uncertainty, which is the possibility of monitoring the behavior of the contracting party. As uncertainty increases, the autonomy of transacting parties decreases.

Asset specificity refers to the degree to which an asset can be redeployed to alternative uses and by alternative users without sacrificing productive value (Williamson, 1991). As asset specificity deepens, bilateral dependency increases and autonomy decreases. Williamson (1991) proposed three generic alternative governance structures based on four parameters. Table 1 summarizes transaction cost economizing governance structures aligned with transaction parameters.

Transaction Parameters	Generic Governance Structure		
	Market	Hybrid	Hierarchy
Contract Law	Classical	Neoclassical	Forbearance
Frequency	Low dependency	Non-trivial dependency	High dependency
	irrespective of number	irrespective of number	irrespective of number
Uncertainty	Minimum	Medium	Maximum
Asset Specificity	Low	Medium	High
Identity	Fully autonomous	Autonomous with non-	Internal
		trivial damage on	
		defection	

Table 1: Transaction Attributes and Alternative Governance Structure

III. Statutory Audit: Theory Building Based on Transaction Cost

Based on the discussion of the preceding section, we can argue that a possible theory building of statutory audit based on transaction cost must fulfill the following conditions:

- statutory audit is a transaction cost surrounding a complex transaction involving two or more parties;
- private order/contract is possible to work out between parties to make a transaction happen;
- moral hazard will arise in the ex-post contract compliance; and
- alternative transaction cost economizing governance structure can deal with ex-post consequences arising from ex-ante contractual arrangements.

In the subsequent sections, we will shed light on these conditions. The rest of the paper will counton the statutory audit arrangement of Bangladesh as the case.

3.1 Transaction Cost Nature of Statutory Audit

Audit of government income and expenditure is a constitutional requirement in Bangladesh (Article 128 of the Constitution of Bangladesh). Government income and expenditure is a complex transaction between the executive, parliament, bureaucracy, and the general people, fulfilling all three conditions: conflict, mutuality, and order. Each of the four parties differs in their interests in transactions:

• The executive and parliament are interested in vote maximizing.

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- The former is tilted to election manifesto and partisan interests.
- The latter is prejudiced toward constituency interests.

Bureaucracy is interested in bureaucratic aggrandizement. People, on the other hand, are interested in maximizing social welfare. Thus conflict is inevitable in the exchange process. Mutual gains can be secured if the exchange can be made by overcoming conflict through order. The executive gets tax money, the parliament gets support, the bureaucracy gets resources, and people get public goods and services. Order is secured through contract agreement: the executive pledges an election manifesto, the parliament represents constituency interests, the bureaucracy vows public service, and people pay taxes and abide by the law. What will tell that order so designed is actually in place and working? Here comes the necessity of statutory audits.

This whole audit process bears considerable transaction costs, which can be measured through the budget allocation of the OCAG and allocation earmarked for other ministries for audit settlement purposes. The OCAG alone had a budget of Tk. 69.18 crore in 2008-09. However, the statutory is the economizing way of governing credible financial transactions that economize other transaction costs; otherwise, the transactions are improbable (Hepp& Mayhew, 2004). Our central argument is that remoteness (i.e., those relying on the transaction are unable to harness information about the other parties due to their physical remoteness) of the parties involved and complexity (i.e., verification of financial data claims specialized knowledge and professional skills that transacting parties do not possess) of the financial process deter parliament and people from judiciously assessing the executive's financial performance. The same factors disable the executive from gauging whether or not the bureaucracy observes due process in financial matters. Thus audit economizes both public (parliament and the executive) and private (taxpayers, voters) transaction costs (Hepp& Mayhew, 2004) and ends up producing mutual gains in the forms of (i) fiscal efficiency as government expenditure could be lower, which could also affect both government revenue and deficit levels; (ii) government effectiveness as monitoring the spending behavior of government bureaus might decrease (perceived) corruption levels; and (iii) the general productivity of resources used in the economy by improving both labor and total factor productivity (Blume& Voigt, 2007).

3.2 Private Ordering/Contract

Complex production and transaction that are remotely susceptible to property rights and their enforcement through the court system become more efficient under private ordering, such as negotiated contracts and their enforcement through adjustment, compensation, termination, and credible commitment (Williamson, 1983 and 1979). For example, franchising, a complex business transaction, cannot be readily defined by property ownership as the franchisor owns the trademark, the outlet is owned by the franchisee, either could own the goods, revenue goes to the franchisee after paying royalty and advisory charges to the franchisor. Both could gain from franchise transactions: the franchisor could avoid capital risk and liability for expanding the distribution network, and the franchisee could bank on the goodwill and know-how of the franchisee. Due to such murky property rights, the franchise is enforced through a contract of mutual obligations. Dispute, if it emerges, is addressed through reviewing the contract, adjudication, contract termination, or compensation. Like the court system, public ordering is considered inefficient and used as a last resort.

The statutory audit is akin to privately ordering a complex transaction with unclear property rights. Who owns the public purse: Parliament, as it is the authority to endorse taxation and approve expenditure? Or the executive, who is the custodian of the public purse? Or the public who pays taxes? All three parties must refrain from claiming ownership as they cannot spend public money as they wish. Alternatively, the state could claim to be the owner. Again problem appears as the state can only claim royalty and safeguard its own if someone takes care of its stake on its behalf. According to the Constitution of Bangladesh, the Financial Management Act 2009, and other financial rules, the parliament, the executive, and the bureaucracy each are responsible for safeguarding the state's stake in the public purse. Such claim of the state ownership of the public purse is jeopardized if all these three parties behave as self-interest maximizers and eventually cause the agency problem

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to crop up (Buchanan, 1993). Therefore, the claim of state ownership can only be backed if the potential agency problem is encountered (Leruth& Elisabeth, 2006). The statutory audit does the same under a private ordering system whereby contract agreement is reached between people and parliament in the form of representation of constituency interests; between parliament and executive in the form of appropriation act and other financial acts; and between the executive and the bureaucracy in the form of medium-term budgetary framework, finance, and treasury rules, office manuals and directives. The statutory audit is the economizing governance of transactions among the parties following contract agreements. Audit reveals how much parties are going with the contract and helps take countervailing actions other than going to the court against proven digression. The degree of private ordering of public expenditure depends on the mandate the SAI of a particular country has been conferred with. Table 2 provides a snapshot of all possible mandates an SAI could have.

What pattern and mandate of an SAI are efficient depends upon the economizing of transaction cost on all transactions in a given period. If financial transactions are marred with corruption, financial audits should get priority. By contrast, if corruption is less but wastage is high, value-for-money audits should be on the top. The OCAG of Bangladesh mainly performs financial audits at present.

3.3 Moral Hazard

Moral hazard and consequent adverse selection in the contract observance can significantly soar transaction costs. Information asymmetry among the parties in the transactions is the root that provokes such suboptimal behavior (Biglaiser&Mezzetti, 1993). A moral hazard occurs when one party insulated from risk due to possessing superior information behaves in a way detrimental to other parties. Adverse selection leads to poor contract design resulting in suboptimal performance. All four parties are susceptible to such unexpected behavior in public finance.

Bureaucracy might show a bloated project budget to perk up rent out of public funds. The executive might submit manipulated financial statements to the parliament to hide financial misdeeds. The parliament might be lenient in holding the executive to account for some 'pork barrel' exchanges. The parliament and the executive could jointly show selected information to get public support on rent-attractive but nationally suboptimal projects. In such cases, the losing party is gradually discouraged from participating in the transaction. The statutory audit heals these problems.

All audits result from information asymmetry, both ex-ante and ex-post (Grossman &Stiglitz, 1980). Ex-ante information asymmetry notches up information sharing costs. When both parties to a transaction have all available information or can obtain it at zero cost, there is no need for an auditor to attest to information provided by one party to another for working out contract terms. Ex-post information asymmetry adds to agency costs. Ex-post audits would be unnecessary if each higher authority had information at zero cost about its subordinates. The statutory audit facilitates ex-ante measurement in negotiating contracts between parliament, the executive, and the bureaucracy and ex-post reporting to monitor and enforce those contracts.

Oversight, insight, and foresight are three unique processes that audit applies to reduce information asymmetry (National Association of Local Government Auditors (U.S. and Canada), 2006). The 'Oversight' aspect of the audit focuses on the question, "Has the policy been implemented as intended?" Oversight evaluates whether government entities are doing what they should do, spending funds for the intended purpose following due process. The 'Insight' aspect assesses the effectiveness of programs and policies- which are working and which are not. It helps develop benchmarks for future contracting. The audit function helps institutionalize organizational learning by providing ongoing feedback to adjust policies. Audit insight finally answers, "Has the policy brought about the intended results?" Concurrently with the accountability function, audits contribute to

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improving government operations. The 'Foresight' aspect of audit identifies evolving risk areas of transaction and helps design remedial governance measures in advance.

The degree of moral hazard and adverse selection depend on a country's public financial management system. For example, in Bangladesh, Public Accounts Committees (PAC) are to settle serious financial irregularities reported by the OCAG. Therefore, moral hazard and adverse selection of the executive and the bureaucracy certainly follow the effectiveness of the PAC. Due to the anti-defection law (i.e., Article 70 of the Constitution), pork barrel exchange, and long-standing dysfunctional parliamentary culture, PAC's performance is far below the expected notch. A newspaper report says 600 audit reports are yet to be settled as of April 2010 involving, more than BDT 18000 crore (The Daily Star, 20 April 2010). It means that moral hazard and adverse selection are likely higher in the government, evident from reportedly large-scale corruption in public finance. Besides, what impact do audit objections have on job security and career progression of those employees against whom objections are raised, and the budget allocation against government agencies with poor audit performance significantly affects moral hazard and adverse selection.

Watts and Zimmerman (1983) argued that auditors who are supposed to guard against a moral hazard are susceptible to moral hazard if they collude with the auditees or the authority that appointed them. Here comes the critical question of an auditor's independence and accountability for performance (Khalil &Lawarree, 1994). Watts and Zimmerman defined independence as the probability that an auditor will report a situation given that it is found. In terms of probability, this could be represented as (1) $P(R \mid F)$ where R is reporting to the authority (in Bangladesh, it is the principal accounting officer of a ministry and finally the PAC) and F is a finding. They argued that the probability of reporting a proven misdeed depends on who hired the auditor and to whom the auditor reports.

In Bangladesh, the OCAG is a constitutional and independent body that reports to the parliament through the president. Nonetheless, of its independent position, the OCAG is manned by the Audit and Accounts cadre officers, which is, according to the Rules of Business 1996, under the administrative control of the Finance Division- an influential executive body. Moreover, the budget of the OCAG is also evaluated and approved by the Finance Division (Institute of Governance Studies, 2009). As to the accountability of the OCAG, the constitution needs to provide more. However, the Finance Division acts as a check on the budgetary autonomy of the OCAG. The executive body has some leverage on the independence and accountability of the OCAG.

3.4 Discriminating Alignment Hypothesis

According to this principle, designing transaction-specific transaction cost-economizing governance structure is possible. The specificity of the transaction depends upon three criteria- asset specificity, uncertainty, and frequency. The statutory audit as a transaction is highly asset specific in some areas, e.g., foreign, aided project audit, revenue audit, etc.; some are moderately asset specific, e.g., development expenditure, and some are lowly asset specific, e.g., commercial

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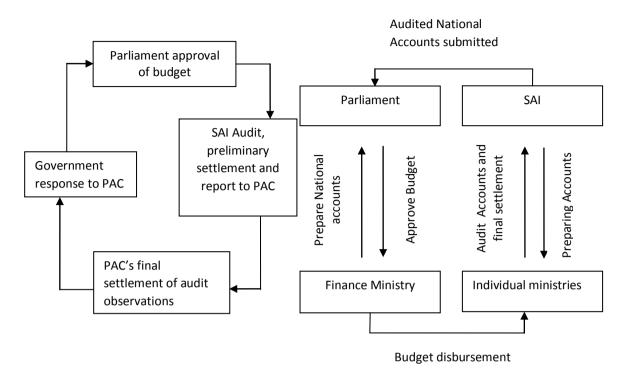


Figure. 2: Comparative Structure of the Westminster (left) and Judicial Model (right)

and recurring expenditure audit. However, uncertainty and frequency are considerably high in statutory audits due to moral hazard problems. Therefore, there are better governance choices than the market transaction for wholesale statutory audit. A hybrid model is also unsuitable as SAIs should be independent of the auditor's influence. The hybrid model seems most suitable whereby parties in the transaction have autonomy but are significantly affected by the deviated behavior of other parties.

Apart from structural choice, discriminating alignment can be applied to the audit settlement process, communication of audit reports, the relationship between the auditors and the auditees, internal control mechanisms such as separation between audit and accounts, application of a code of ethics, and a host of other issues related to effectiveness and efficiency of the OCAG. For example, the audit settlement process in Bangladesh follows a complex and lengthy settlement process that causes soaring transaction costs. Meetings between the OCAG and the auditee are held in the presence of officials who need more decision-making power (Institute of Governance Studies, 2009). Moreover, the OCAG does not have the power to enforce strict time limits on the auditees to respond to audit queries. Moreover, the format and language of the audit reports in vogue must be legible to non-specialists, and communication of audit reports is not widespread in Bangladesh. As Blume (2007) argues, the incentive structure of government auditors in developing countries in terms of salary and other monetary benefits is not performance-driven; communication of audit reports to different stakeholders bears priceless importance to mount pressure on the parliament and government to act on audit observation promptly on the one hand and to keep constant vigilance on the OCAG to bring out better quality audit reports.

IV. Conclusion

Scholars, though, have underscored the importance of the statutory audit for democratic and managerial accountability of the government; the field has been devoid of theories that could be applied to analyze the nature and effectiveness of SAIs worldwide. This paper has filled in this void, at least partially. We have demonstrated that transaction cost economics has the potential to explain almost all critical aspects, such as independence, efficiency, and effectiveness of SAIs, and develop general principles for designing better

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statutory audits. As a test case, we have shown that public finance in Bangladesh is a complex transaction between the parliament, executive, bureaucracy, and the people at large, which property rights could hardly characterize. Consequently, intelligent private ordering is necessary to make transactions easy. We have demonstrated that audit observation followed by the punitive settlement process checks the moral hazard and adverse selection of different state parties involved in public finance. Transaction cost economizing governance structure could be designed in every audit independence, accountability, efficiency, and effectiveness process. Although our focus has been the analysis of the SAI, Bangladesh, following transaction cost principles, we have confined ourselves to the positive study of the institution for theory-building purposes and deliberately avoided details of the normative study to pinpoint current loopholes and suggest improved options. We, however, acknowledge that normative analysis of the statutory audit based on transaction cost is necessary to substantiate a general theory.

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