

A Critical Review of Ethics Issues and Corrupt Practices in the Global Construction Industry

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Abstract

Unethical conduct and corrupt practices in engineering and construction enterprises worldwide create adverse humanitarian impacts and significant economic costs. Related issues have been addressed by a number of agencies in the U.S. and abroad, and several collaborative initiatives have been undertaken in recent years to identify and correct the existing deficiencies, which has led to changes in the American Society of Civil Engineers' (ASCE) ethics code and the development of various mechanisms to combat corruption in the global construction industry. The information available from ASCE, Construction Management Association of America (CMAA), Fails Management Institute (FMI), Transparency International (TI), World Bank, World Economic Forum (WEF) and other sources is critically reviewed in this paper with reference to bribery, fraud, extortion, collusion, money laundering, bid shopping, change order, and payment and claim games. The roles of government, industry organizations, ethics codes, corporate ethics policies, ethics education and training, and new legislation are reviewed as the building blocks of improving the ethical environment.

Keywords

Construction industry, Corruption, Ethics, Professional practice

1. Introduction

Professional ethics is an area that has attracted considerable attention for a long time, and it continues to be an area of importance and focus for engineering and construction enterprises because of the continuing concerns over unethical practices. It is suggested by Transparency International (TI) (2005) that nowhere is corruption more ingrained than in the construction sector for both the developing and the developed world. It is estimated that up to 10 percent of the global spending on construction is lost to all forms of corruption. Given that construction is a \$4 trillion business annually, this estimate puts the total cost of global corruption and unethical conduct to about \$400 billion per year. On the domestic front, based on a survey of the US construction industry, FMI (2004) estimated that anywhere from \$5,000 to \$50,000 for every million dollars spent on projects would be lost or be unaccounted for in some sort of unethical transaction.

The damage caused by unethical behavior in the construction industry goes well beyond the monetary losses. The ultimate cost of corruption is paid in lives lost, such as those due to the collapse of structurally deficient buildings in the wake of earthquakes in different parts of the world. According to Lewis (2005) the primary reason for collapse of such buildings can be the practice among contactors of curtailing steel, or of using substandard concrete and building methods for self-serving financial gains. In addition, building and planning regulations could have been ignored because bribes had been paid to bypass them.

The challenges posed by corruption are often difficult to combat because of the peculiar ways corruption tends to become a part of local customs and norms, and a condonable behavior in many parts of the world. Across the globe, many organizations and industry-based institutions have acknowledged the problem, and have initiated a variety of studies, efforts and alliances in the fight against corruption. In this paper, we review the state of ethics and corruption in the global construction industry and identify the industry's shortcomings. In balance, we also observe the positive changes that have been effected through the efforts of various institutions and organizations.

2. Sizing up the Problem

Lambsdorff (2004) has attempted to quantify corruption by using a Corruption Perceptions Index (CPI). This index is composite in nature, and is based on random surveys eliciting the perceptions of the general public, as well as evaluations by academics, risk agencies and analysts, nonresident and resident experts, and business leaders. TI (2005) presented the ranking of 146 countries based on this index, along with individual Country Reports addressing the key ethical issues and cases relating to each country. From the rankings of countries presented, it is observed that more than 100 countries have scores less than 5 on the CPI scale of 1 (best) to 10 (worst), and 60 percent have scores less than 3, indicating that corruption is widespread in many countries. Generally speaking, developed countries had the lowest incidence of corruption, while the third world and developing countries exhibited a higher incidence of corruption.

Salama *et al.*, (2005) indicates that it is difficult to quantify the prevalence of corruption in the construction industry because developers and builders are reluctant to discuss the topic, fearing retribution. Based on the premise that the existence and extent of corruption may be more conjectural than factual, The Chartered Institute of Building (2006) conducted a survey to gather views on corruption within the UK construction industry. It was found that there was a great deal of variation in the way that respondents perceived the nature and extent of corruption. It was acknowledged, however, that 41% of those surveyed had been offered a bribe on at least one occasion.

FMI Corporation performed a study for the Construction Management Association of America (CMAA) titled "Survey of Construction Industry Ethical Practices" and published a report (FMI, 2004). The study focused on the activities of construction project owners, architects, engineers, construction managers, general contractors, and subcontractors. The results were quite eye-opening. For instance, when respondents were asked whether they had personally experienced, encountered, or observed industry-related acts or transactions that they would consider unethical in the preceding 12-month period, an overwhelming 84 percent said "yes". In addition, 34 percent indicated that they had encountered such acts "many times". The survey was not intended to be exhaustive; the total number of respondents numbered 270. However, having such a high percentage of respondents from across the industry directly observing unethical conduct shows that there are serious ethical problems in the industry.

More than half (61 percent) of the FMI survey respondents believed unethical behavior affected the public's perception of the industry, and more importantly, it affected the level of trust between owners and contractors, and contractors and design professionals. A majority (63 percent) of survey respondents felt that the construction industry was tainted by the prevalence of unethical acts. Similarly, 61 percent of the respondents thought unethical behavior was affecting the cost of completing the projects. These observations are consistent with the earlier research by CII (1993) which found that the cost of projects increases as the level of trust between the project participants decreases.

3. Understanding Unethical Acts and Corruption

According to the Anti Corruption Training Manual authored by Stransbury and Stransbury (2007), corrupt practices can occur in any country or locality, during any phase of a construction project, at any level in the contractual hierarchy, and may be committed by any project participant, e.g. government officials, project owners, contractors, suppliers, consultants, sub-contractors, agents, etc. Corruption may take place in project identification, project financing, design, tendering/bidding, implementation of project work, procurement of materials, equipment and services, project approvals, payments, or submission of claims. Detailed descriptions and examples on bribery, fraud, extortion, collusion, and money laundering are covered in the manual as briefly summarized below. Most are considered criminal offenses in many parts of the world.

Bribery may involve a cash payment or a non-cash favor (e.g. promise of a future contract, or a vacation). In some cases, it involves an intermediary agent. Bribery often involves a degree of fraud. For example, a contractor who wishes to be short-listed for a project pays a cash bribe to the client's engineer to ensure that key competitors are eliminated from consideration. Another example is that a contractor submits a false claim to the project owner, and then bribes the certifier to approve the claim.

Fraud involves deception in order to gain financial or other advantage. It can include manipulation of bidding / tender requirements to favor a particular bidder, concealment of defects, dishonestly levying liquidated damages, withholding payments, exaggerating the quantum of a claim, and fabricating or falsifying evidence to support claims. An example of fraud is that a concrete supplier deliberately supplies concrete of cheaper and inferior specification, but invoices the contractor for the higher quality material conforming to job specification. Another example is a person presenting false information in his resume to get a construction engineering or management job for which he is not qualified.

Extortion is a form of blackmail where one party makes threats against another party of adverse consequences unless demands, usually for payment or financial concessions, are met by the other party. For example, an owner persuades his architect to include false rectification items in the schedule of defects before final payment, and sets off the alleged rectification costs against the balance due to the contractor. The contractor disputes the deduction, but yields to the owner and accepts the reduced amount after the owner challenges him to pursue litigation in order to get the remainder of the money, because the contractor can not afford litigation. In a different case, a contractor is due the final payment on a project. The client's representative informs the contractor that unless the contractor makes an extra payment to him personally he will not authorize the release of the final payment. The contractor makes the extorted payment; the client representative releases the final payment.

Collusion occurs where two or more parties cooperate to defraud another party, such as forming a "cartel" or "anti-trust" type entity. A well-known example is "bid-rigging" or "price fixing" where bidders collude fraudulently to arrange which bidder will win a contract and at what price. The way this happens is that a group of contractors who routinely compete in the same market secretly agree to share the market between them. They will each falsely "compete" on all major bids, but will in advance agree which of them should win each bid. The contractor who is chosen by the group to win a bid will then notify the others prior to bid submission as to its price. The other contractors will consequently bid at a higher price to ensure that the pre-selected contractor wins the bid. The winning contractor would thus be able to achieve a higher price than if there had been real competition for the project. As a result, the clients pay more for their projects than they would have, had there been real competition.

Finally, money laundering is done by moving cash or assets obtained by criminal activity from one location to another, often to conceal the source of funds, such as an owner paying a fraudulent claim by depositing the funds to the contractor's bank account, which is subsequently moved to another account.

Money launderers often send money through various "offshore accounts" in countries that have bank secrecy laws, which for all intents and purposes, enable anonymous banking (Layton, 2005).

Bid shopping/reverse auctions, change order games, payment games, claims games and unreliable contractors were listed by FMI (2004) as the most critical issues concerning ethical conduct in construction. These topics have attracted considerable attention in the construction community for many years, and are discussed below.

In the practice of bid shopping or reverse auctions, the owner or party requesting bids will disclose the lowest bid to other competing bidders, and ask them to match or lower the bid. This reduces the bidding process to a sort of reverse auction, where bidders keep lowering bids until they reach a point where all but one of the bidders decides that the contract may not be profitable anymore. While some FMI survey respondents were ambivalent about whether bid shopping was unethical, CMAA (2005) has adopted a policy opposing reverse auctions, because it holds the belief that reverse auctions can increase risk associated with projects, and can jeopardize the success, and even the completion of projects. The policy statement explains that since the practice of reverse auctions tends to select contractors primarily on the basis of lowest cost, rather than a "qualification-based system", the selection process may result in inexperienced contractors being hired. Also, an otherwise qualified contractor may be tempted to take on the project at a lower cost than that required to cover his risk.

In change order gamesmanship, bidders will deliberately bid low in order to secure contracts, in anticipation of changes that will eventually inflate the project cost once the bid is awarded. Bidders may, for example, intentionally include vague language to describe the scope of work that they are bidding for, or may intentionally leave out information about the project that the owner may not be aware of at the time of bidding. Afterwards, once the contract execution begins, they will attempt to make additional money by incorporating change orders. The occurrence of such practices is likely to increase even more if the practice of reverse auctions becomes more common.

In regards to playing payment games, besides billing for unperformed work, many FMI survey respondents pointed out a form of over-billing, whereby the contractors try to increase cash flows earlier in the project by inflating the bid or unit prices for activities that are scheduled to happen earlier in the construction process. In order to keep the total bid price low, these contractors would then be forced to bid at, or even below, their cost for activities that are expected to happen later during the construction process. This practice is considered unethical due to two reasons. First, it causes the owner to act like a financier to the contractor, which was not planned for. Second, the practice creates uncompensated risk for the owner, since the contractor may find it hard to maintain cash flows during the later stages of the project, when the billed amount may not cover the contractor's actual period costs. As a result, the contractor may seek to cut costs by compromising quality, safety, or both. In an extreme case, the contractor may even default by not completing the project. On the other hand, there are some advocates of over-billing in the construction industry, who cite the problem of owners and/or contractors holding funds and deliberately delaying payments due contractors and subcontractors as a "justification" for over-billing. Nevertheless, there is little dispute on the fact that the practice of holding funds or not "paying when paid" is unethical.

Another unethical practice is that of contractors indulging in claims games. In this scheme, similar to change order games, the contractor will attempt to inflate billing during construction by making numerous claims. Respondents indicated that owners are also known to attempt to deflect responsibility and cost for their oversight at times by penalizing contractors through claims and or payment withholdings. This is another apparent reason for some contractors resorting to over-billing in the early stages of the project to avert cash flow problems down the road.

On the issue of unreliable contractors, some contractors may take on projects without being well qualified to handle its scale or complexity, or without the intention of staffing these projects with adequate number of qualified workers. Contractors may also promise more than what they are capable of delivering to the owner, and default on their promises.

4. The Complex Nature of the Problem

Construction is an industry with a lot of unique projects whose requirements are specific to the owner's needs. Because these projects usually involve a large number of entities and individuals working together, the detection of unethical behavior in them often becomes quite difficult. In a typical medium- to large-sized project, there may be anywhere from a few hundred to a few thousand independent contractual relationships between the different parties involved. This multitude of interrelationships creates an environment rife with opportunities for fraud. In most developing countries, there is a great need for large infrastructure projects. These projects tend to be big budget undertakings by nature that generally involve public money, or funds from international agencies such as the World Bank or International Monetary Fund (IMF). High monetary stakes, combined with bureaucratic red tape and lack of procedural transparency creates a situation highly conducive to bribing officials and other forms of corruption.

The role of the World Bank warrants special attention when considering large-scale infrastructure projects in developing countries. The stated mission of the Bank is to foster economic development and eliminate poverty among all member nations. As explained by Oestreich (2004), the Bank's principal mandate traditionally has not been to act as a "moral agent" or to address broad ethical and human rights issues in countries where it funded projects, but it functions fundamentally as a financial institution, trying to maintain its ability to make performing loans, and keep its AAA credit rating. Therefore, it has frequently been criticized for its neutral stance towards punishing companies that have shown unethical behavior. However, this outlook has been changing. The Bank has begun putting corruption high on the list of policy priorities over the past decade, and have supported more than 600 anticorruption programs and governance initiatives developed by its member countries since 1996 (The World Bank Group, 2007). In addition, the World Bank now maintains and publishes a list of unethical companies that are debarred from participating in projects it funds. Depending on the seriousness of the offense, the debarment may be temporary, or permanent. The Bank also offers a hotline for reporting alleged fraud and corruption.

Corruption not only adds to the cost of expanding infrastructure capacity through new projects, but it also inflates the cost of maintaining the existing infrastructure. Roads, bridges, dams and power stations need maintenance over their service life, and often the cost of maintaining the existing facilities will limit the investment outlay available for new projects. This is especially true where the quality control during the building phase is substandard due to corruption, which necessitates excessive repair and maintenance work later on. Further, because the pressure is usually more on fixing a deteriorating infrastructure rather than building new facilities, the limited resources available preclude starting many new projects. In any event, the economic cost of corruption in publicly funded projects eventually gets passed on to the taxpayers.

5. Improving the Ethical Environment

Eliminating or reducing corruption presents a formidable challenge, but it is important that meaningful initiatives are taken towards achieving this goal by the government, industry organizations and corporations. A brief summary follows.

Government legislation is key to curbing corruption. For instance, the US Government has long been aware of the problems associated with the bribery of foreign officials, which affects international

business. This led to the enactment of the Foreign Corrupt Practices Act (FCPA) in 1977 to curb it and restore public confidence in the integrity of the American business system. However, in some sense, this law also left the American firms at a disadvantage relative to their foreign competitors, who were able to continue bribery and other corrupt practices without fear of penalty. Yet, there have also been questions on the efficacy of this act, because it has not eliminated bribery problems associated with the American firms (Crag and Woof, 2002). There are several other legislative acts, such as Sarbanes-Oxley (Soxlaw, 2002), which address ethics issues in industry and corporations.

An important contribution of the industry organizations is to raise awareness of the ethical issues facing each industry and delivering a coherent message to counter the problems. Many respondents to the FMI survey indicated that they strongly favored industry organizations such as CMAA, ASCE and The Associated General Contractors of America (AGC) to take the lead in anti-corruption initiatives. For these initiatives to be effective, all aspects of construction including planning, execution, monitoring, financing, staffing and all communications will need to become more transparent. Open discussion of the ethical issues facing the industry informs each member of the nature and seriousness of the problem, and its implications to the individuals and their firms.

As a professional society, ASCE has focused on ethical issues for decades, and has articulated the challenges faced by the engineering professionals. Its Code of Ethics provides guidance to all members on ethical conduct in the performance of their duties. Additionally, ASCE Standards of Professional Conduct for Civil Engineers is available to all engineers and engineering firms for use as they see fit. In recent years, ASCE has become more vocal against global corruption and has magnified its efforts in acting as a catalyst for individual professional engineers in a concerted counter movement. In order to tackle the problem, the ASCE Board of Direction created the Task Committee on Global Principles for Professional Conduct (TCGPPC) in 2004. Since its inception, TCGPPC has worked closely with Transparency International, World Bank, World Economic Forum, World Federation of Engineering Organizations and other groups, and produced a report (ASCE, 2005) presenting recommended principles of professional conduct and ethical guidelines more specific to corruption (Figure 1). Subsequently, ASCE's Board of Direction adopted an amendment to its Code of Ethics, including these guidelines in Canon 6 (Figure 2).

Further, on the international front, WEF formed a coalition of organizations and companies called Partnering Against Corruption Initiative (PACI). Well over 100 companies signed on this initiative aimed at countering corruption and bribery. The initiative calls for a commitment of all signatories to two fundamental actions: A zero-tolerance policy towards bribery, and the development of practical and effective implementation programs. Supporting companies strive to implement anti-corruption practices based on these elements, or use them to benchmark and improve their existing programs aimed at achieving ethical conduct in their international project ventures. Transparency International has also been a part of this initiative, with a representative on the board (WEF, 2006).

In private industry, major engineering and construction firms have developed corporate ethics programs and policies and engage ethics officers in their implementation (see, for instance, Jacobs Engineering Group, Inc. 2004 and Bechtel Group, Inc. 2002). On the other hand, a majority of the firms worldwide have no such programs. Ideally, for the corporate ethics programs to be effective, they must incorporate an ethics policy statement and code of ethics, ethics training, and procedures for periodic program reviews and appraisals.

Typically, corporate ethics programs are customized to the needs of the companies and cover elements such as statement of commitment (to clients, employees, vendors, community); personal responsibility for ethical conduct (consistent with roles); accurate and transparent record keeping; conflicts of interest; client relations and business courtesies; confidential information; use of company assets; political contributions; software license and copyright compliance; compliance with environmental laws; antitrust laws; dealing with foreign public officials abroad; and reporting violations and discipline. Unfortunately,

small companies and contractors, may not be able to justify a customized ethics program, and they may simply adopt ASCE's or CMAA's ethics codes as their own.

- Individual engineers can help fight crime and corruption in the engineering and construction industry worldwide by:
1. Ensuring that they are not personally involved in any activity that will permit the abuse of power for private gain
 2. Recognizing that funds intended for projects for the benefit of mankind worldwide too often go into pockets of dishonest individuals.
 3. Understanding that corruption occurs in both the public and private sectors, in both the procurement and execution of projects, and among both employers and employees.
 4. Refusing to condone or ignore corruption, bribery, or extortion; or payments for favors.
 5. Urging professional engineering societies to adopt enforceable guidelines to ethical professional practice.
 6. Enforcing anti-corruption guidelines by reporting infractions by members or non-members of the engineering profession.

Figure 1: Recommended Principles for Professional Conduct (ASCE 2005)

1. Engineers shall uphold and advance the integrity, honor and dignity of the engineering profession, and shall promote the most effective use of financial resources through honest and impartial service and fidelity to the public, employers, associates and clients.
2. Engineers shall be scrupulously honest in their control and spending of monies intended for the projects on which they work.
3. Engineers shall adopt a zero-tolerance approach for bribery, fraud, deception and corruption in any design or construction work in which they are engaged
4. Engineers should be especially vigilant in countries where payment of gratuities and/or bribery is tolerated and condoned practices.
5. Engineers should include certifications in all contract documents specifying zero tolerance of bribery, extortion or other fraud during the procurement and execution of the project
6. Engineers must strive for complete transparency in the engagement of agents who facilitate projects and other work, to include the reporting of purposes, names, addresses, and gratuities and commissions paid for all agents in their employ.
7. Engineers shall be duty-bound by the ASCE bylaws to report any observed violations of the Society's Code of Ethics.

Figure 2: The New Canon 6 of the ASCE Code of Ethics (ASCE 2005)

Finally, effective December 24, 2007 U.S. law, FAR Part 3.10 - Contractor Code of Ethics and Business Conduct (Acquisition Central, 2007) mandates an active ethics awareness and compliance program for contractors and subcontractors working on government projects. With some exclusions, awards of \$5 million for projects longer than 120 days must have a code of ethics and business conduct, as appropriate for the company size and level of federal contracting. The company must institute and employee ethics and compliance training program and "internal control system" which includes a hotline. The CEO needs to be actively involved. It is expected that larger companies will need to hire an ethics and compliance officer to oversee the program, conduct periodic reviews, audits and enforce disciplinary action for misconduct.

6. Conclusion

The review of global unethical and corrupt practices presented in this paper clearly shows that the construction industry has challenges in this regard, and is taking actions to address the problems. Whatever the extent of corruption may be in the construction industry, it is not an insurmountable obstacle. As with any challenge, the means for overcoming it will come from understanding it. Movements initiated by Transparency International and the World Economic Forum are intended for achieving just such an understanding of corruption, and the factors that contribute to its strengthening or weakening. Corruption in the construction industry has also been getting increasing attention from other associations and organizations such as International Federation of Consulting Engineers, American Society of Civil Engineers and the Construction Management Association of America in addition to an increasing number of individual companies. Recent federal legislation on Contractor Code of Ethics and Business Conduct is a positive sign of institutionalizing the efforts on curbing corruption and encouraging ethical practices in the construction industry.

7. References

- American Society of Civil Engineers (ASCE). (2005). Report of the Task Committee on Global Principles for Professional Conduct, Draft Report No. 3. Online at <http://content.asce.org/international/CommitteeReport.html> on June 04, 2006.
- Acquisition Central. (2007). Contractor Code of Ethics and Business Conduct. Online at http://www.arnet.gov/far/current/html/Subpart%203_10.html on December 26, 2008.
- Bechtel Group, Inc. (2002). Bechtel Business Ethics. Online at <http://www.bechtel.com/ethics.htm> on May 19, 2007.
- Bosshard, P. (2005). "The environment at risk from monuments of corruption". *Transparency International Global Corruption Report 2005*. Online at http://www.transparency.org/publications/gcr/download_gcr/download_gcr_2005 on February 26, 2006.
- Crag, W., and Woof, W. (2002). The U.S. Foreign Corrupt Practices Act: A study of its effectiveness. Online at <http://www.blackwell-synergy.com/doi/abs/10.1111/0045-3609.00129> on Feb 19, 2008.
- Construction Industry Institute (CII). (1993). *Cost Trust Relationship*. Publication 24-1, Bureau of Engineering Research, The University of Texas Austin. USA.
- Construction Management Association of America (CMAA). (2005). Reverse auctions can endanger projects. Online at <http://cmaanet.org/auctions.php> on September 15, 2005.
- Conacher, D. (2004). "Canada's rules on lobbying: Key loopholes remain". *Transparency International Global Corruption Report 2004*. Online at http://www.transparency.org/publications/gcr/download_gcr/download_gcr_2004 on February 26, 2006.
- Fails Management Institute (FMI). (2004). Survey of construction industry ethical practices. Online at <http://www.fminet.com/dotAsset/4344.pdf> on September 22, 2005.
- The Chartered Institute of Building (CIOB). (2006). Corruption in the UK construction industry. Online at <http://www.ciob.org.uk/filegrab/CIOBCorruption.pdf?ref=283> on Feb 19, 2008.
- Jacobs Engineering Group, Inc. (2004). Code of ethics for the chief executive officer and senior financial officers. Online at www.jacobs.com/governance/pdfs/CodeofEthics.pdf on May 19, 2007.
- Lamdsdorff, J.D. (2004). "Corruption perceptions index 2003". *Transparency International Global Corruption Report 2004*. Online at http://www.transparency.org/publications/gcr/download_gcr/download_gcr_2004 on May 20, 2007.
- Layton, J. (2005). How money laundering works. Online at <http://money.howstuffworks.com/money-laundering1.htm> on May 22, 2007.
- Lewis, J. (2005). "Earthquake destruction: Corruption on the fault line". *Transparency International Global Corruption Report 2005*. Online at http://www.transparency.org/publications/gcr/download_gcr/download_gcr_2005 on May 20, 2007.

- Salama, J. J., Schill, M.H., and Springer, J. D. (2005). Reducing the cost of new housing construction in New York City: 2005 update. Online at http://furmancenter.nyu.edu/CREUP_Papers/cost_study_2005/CostStudy_intro.html on December 22, 2007.
- Soxlaw. (2002). The Sarbanes-Oxley Act. Online at <http://www.soxlaw.com> on December 26, 2008.
- Stransbury, C., and Stransbury, N. (2007). "Anti corruption training manual", Transparency International UK, < http://www.transparency.org.uk/TI_TRAINING_MANUAL.doc > (December 22, 2007)
- Transparency International (TI). (2005). Global Corruption Report 2005. Online at http://www.transparency.org/publications/gcr/download_gcr/download_gcr_2005 on January 8, 2007.
- The World Bank Group. (2007). Anti-corruption. Online at <http://www.worldbank.org/anticorruption> > on May 19, 2007.
- World Economic Forum. (2003). Tackling corruption is good for businesses. Online at <http://www2.weforum.org/site/homepublic.nsf/Content/Tackling+corruption+is+good+for+business.html> on August 11, 2005.