Trends in contracting of construction projects: A Case Study

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Abstract

Construction projects are usually very dynamic in nature, involving complex processes and confront risks of uncertainty and constant change. Effective management of such projects therefore requires flexible relationship between the client and contractor. Flexible relationship requires mutual trust between the client and contractor. The contracts that are inflexible suffer problems such as project delays, cost overruns and poor quality. This study is conducted with an intention to investigate the role of trust in the contracting of construction projects. The study is carried out in one of the most underdeveloped provinces of Pakistan i.e. Khyber Pakhtunkhwa. The construction industry in here is much underdeveloped and need to go through major transformation. This paper aims to analyze the current status of the client contractor relationship in the context of trust with in the construction industry and to find out the factors that facilitate trust and factors that impede trust during the contract. For this purpose a total of thirty contractors were randomly selected and interviewed from the construction industry of which fifteen were from the private sector and fifteen were chosen from the government sector. The interviews results show that trust plays a significant role in the client contractor relationship. Timely funding to the contractor, timely completion of project, use of skilled labor and due time given by the contractor to the project are the factors that facilitate/ impede the development of mutual trust during the project contracting. Further the data reveals that the private contractors consider trust as a predecessor for contracting whereas on the government side contract is a predecessor for trust.

1. Introduction:

Working relationships often involves interdependence and therefore people working together in organizations or projects need to have control mechanisms in place, in order to be more productive and to work with fewer conflicts. Organizations in order to avoid selfish behaviors and potential litigations within projects use contracts as a control mechanism (Jensen and Meckling, 1976; Meyer, 1983; Sitkin and Bies, 1994; Williamson, 1975) but because legal remedies have been found to be weak and not long lasting (Sitkin and Roth 1993, Argyris 1994., Donaldson and Davis 1991., Granovetter 1985). Current trends in the workforce composition and the way work places are organized require greater reliance on trust. Reason underlying this change

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is the workforce diversity (Jamieson and O'Mara 1991). A diverse group of people working together would require them to work more closely with each other. Since they have no interpersonal similarities, are coming from different backgrounds and have uncommon experiences, the only thing that would bond them together in such a situation is mutual trust (Berscheid and Walster, 1978; Newcomb, 1956). Similarly another trend that has been found to be taking place in the workplace environment that have enhanced interest in the study of trust is a move towards a more participative management styles (Lawler, 1992) and the emergence of the concept of self-directed teams with greater autonomy (Wellins, Byham and Wilson, 1991). This requires more attention towards trust and less on other control mechanisms (Golembiewski and McConkie, 1975; Larson and LaFasto, 1989). The aim of this study is to investigate the importance and role of trust in the contracting of construction projects. It is intended to investigate the factors that help in the creation of trust and factors that impede trust during the contracting process.

2. Trust in contracting (Review of Literature)

Before embarking upon a discussion on trust in contracting, it would be appropriate to provide a brief introduction of the terms “trust” and “contract” and the nature of their relationship. Trust is an elusive concept to define (Gambetta, 1988; Yamagishi & Yamagishi, 1994), this makes sense perhaps in that various authors have attempted to define it differently and there is no universally accepted definition of trust (Lewis & Weigert. 1985a; Shapiro. 1987; Taylor. 1989; Keen et al. 1999).

According to Mayer et al. (1995) people need to trust each other because working together often involves interdependence, people therefore are required to trust others in a number of ways for attaining their personal and organizational objectives. Trust is vital whenever risk, uncertainty, or interdependence exist (Mayer, Davis & Schoorman, 1995; Mishra, 1996). Trust is simply indispensable for interpersonal (Golembiewski & McConkie. 1975; McKnight et al.1998; Dirks and Ferrin. 2001) and commercial relationships (Morgan & Hunt, 1994; Gefen et al. 2003; Koufaris & Hampton-Sosa. 2004).

This section of the paper focus on the relationship between trust in contracting in the procurement process of construction projects. Because contracting mainly involves procurement of either tangible products or services from outside organizations. Procurement therefore is an integral component in contracting. Zaghloul and Hartman. (2003) argues that Inter-organizational relationships are mainly controlled through different types of contracts depending on the nature and extent of trust and relationship between the organizations (buyer and seller). According to Woolthuis et al. (2005) literature does not give sufficient evidence as to whether trust precedes

contract or vice versa. However at times they seem to complement each other and at other instances they look like substitutes. Some authors like (Eriksson & Laan, 2007) suggest that trust is a precondition for partnering. This means that the parties making the contract will only choose partnering when trust exists among them (Black et al. 2000). While others, such as Thomas et al. (2002), Cheung et al. (2003), Chan et al. (2003), suggest that trust is something that needs a principal's willingness to agree to the partnering agreement. The creation of trust/mistrust starts right at the onset of agreement finalization (Rahman and Kumaraswamy. 2002), clients willingness/unwillingness to agree to the terms and conditions shows the level of trust/mistrust in the contracting party. Successful partnering would lead to trust and cooperative relationship, open communication, mutual risk sharing and vigilant response to changes in the scope of the project (Chan et al. 2003). Colledge (2005) further, it also helps in the creation of social capital (networks) and sharing of tacit knowledge (experience) leading to innovations and competitive advantages for the contracting organizations.

It is actually the extent of trust that decides the type of a contract (Black et al. 2000). Williamson (1975 & 1985) classifies contracting into three types classical, neo-classical, and relational contracting. Classical and relational contracting are two extremes. The classical contracting is one, which is used for discrete transactions and does not need special provisions in the contract as the contracts in here are standardized with predetermined penalties in case of non-conformance. Whereas, transactions that involve specific investments should recourse to relational contracting (RC) which helps in the development of trust among inter-organizations (Rahman and Kumaraswamy. 2005). The most contemporary form of Relational Contracting exists in the shape of partnering, alliancing, joint ventures etc. Neo-classical contracting is a balanced approach that is neither too discrete nor too flexible. Zaghoul and Hartman (2003) contend that trust has a number of benefits for the contracting parties; for example, it lowers the transactions costs through mutual risk sharing during the life of the project (Klemetti. 2006) allowing free communication amongst the contracting parties and project principal thus resulting in lower disputes during the life of project (Ellison & Miller.1995) further it also helps reinforce long-term (strategic) relationships among the contracting parties (Hartmann. & Caerteling. 2010).

Jeffries & Reed (2000) have identified a negative side of trust; contrary to the popular belief that trust is good for long-term relationships between buyer and seller. However, a misuse of trust may lead to inefficiencies and wastage in the short term. The authors have classified trust into two categories i.e. cognitive and affect based trust. Cognitive based trust according to the authors is trust in the professional competence of the supplier or seller and affect based trust is the emotional attachment

that develops with the supplier or seller over a period of time. High cognitive and low affect based trust according to the authors will usually result in a better solutions in relational contracting, whereas high affect based trust which is solely based on affection could have detrimental effects in a way that such attachment will result in a low priority for optimal solutions and high for emotional attachments within the project.

Although relational contracting (RC) approach has produced positive results in the past, but there is reservation about its value and viability (Kumaraswamy et al 2005). Using RC approach does not guarantee good results because for an RC approach to be successful one needs an RC compatible culture (Rahman and Kumaraswamy, 2002). In a situation of distrust between people or organizations a RC approach is not expected to produce good results. Kumaraswamy et al. (2005) suggests that it will then be very important especially for such projects to bring about a major change in their project culture in order to implement the RC approach successfully, because a trusting environment is the key to the successful implementation of relational contracting.

According to Williamson (1985) there is a positive relationship between trust and contract while others like Woolthuis et al. (2005) argue that there is a negative relationship between them. Williamson (1985) is of the view that there is always a chance for an opportunistic behavior from the contracting party and therefore trust will not be sufficient to safeguard the interests of the parties to the contract that is why, the classical view of contracting suggest that transactions be safeguarded through formal contracts. (ibid) When formal contracts are created the parties to the contract are in a way forced to trust each other and thus it claims that contract precedes trust and that trust is automatically created with the creation of a contract. Others on the other hand (Woolthuis et al. 2005) claim that trust precedes contract and that the need for a more formal contract is reduced in the presence of trust amongst the contracting parties. Trust in a way reduces the need for a more formal control and parties are expected not to be opportunistic in behavior.

3. Methodology

A case study methodology was adopted in order to empirically investigate the role of trust and to identify the factors that facilitate/impede the development of trust during project contracting. The units of analysis were the individual contractors from the private and government sector of the construction industry. For this purpose two lists were obtained from Peshawar Development Authority (PDA), one for the private sector contractors and the other for the government sector contractors. Random sampling technique was then used to select contractors from the given lists. The method utilized for the collection of data was interview. A total of 30 interviews were conducted of which 15 contractors were interviewed from the private sector selected

on random basis and similarly 15 interviews were conducted with the government contractors selected on random basis. Reason for selecting the private as well as the government sector contractors was to cover a broader perspective and to identify the current status of construction projects within the two broad sectors. It was expected that the data may reveal entirely different approaches in practice within the two broad categories of contractors.

For most part of the analysis of data collected from interviews, software named Leximancer has been used. This is thesaurus based software which is very useful in identifying the key themes within questions that involves long descriptions or explanations. So for the questions that involved longer descriptions or explanations, leximancer was utilized whereas simple frequency tables are used for dichotomous or questions that had short and simple answers.

4. Analysis and Discussion

Q - What is the source of your project's funding.

Out of 30 interviews conducted with the contractors, it was revealed by the data that 15 contractors working in the private sector were working on the construction projects funded by the private clients. Similarly 15 contractors working in the government sector were working on the construction projects funded by the government of Pakistan.

Q - Brief description of your project

Out of thirty contractors interviewed, most of the private contractors were working on building houses in different areas of Khyber Pakhtunkhwa, whereas the government contractors were involved in construction of roads, hospitals, government offices, tube wells, fish farms, schools, and public markets.

Q - Size of your project team

The biggest project team comprised of 08 staff members whereas the smallest team consisted of the contractor himself with no team members. The biggest team was the contractor who is involved in the government project most of the time whereas the contractors with smallest teams or no teams were the ones who were mainly involved in projects in the private sector.

Q - What stage of the life cycle is your project in?

Out of thirty projects analyzed, four were in their planning phase, eight projects were in the initiation phase, eleven projects were under execution and seven were in the phasing out stage.

Q - How much is the budget for your project?

Based on the information provided by the contractors, the project with a maximum budget was \$3.07 million awarded to one of the government contractors. The project with a minimum budget was \$11,455 awarded to a private contractor. However, the average range of project budget was observed to be \$0.28 million. Further it was found that most of the government contractor had projects with above average budgets and most of the private contractors had projects with below average budgets. The reason why the government contractors had high budgets was because those were the projects awarded by the government whose scope was much bigger than the projects awarded by the private clients. That is why the government contractors comprised of bigger teams than the private ones.

Q- What is the level of your experience?

Three categories were created for the contractors having different levels of experience in their field. Contractors having above 10 years' experience were put into advanced category. Contractors having experience between 5 to 10 years were put into intermediate category and similarly the contractors with less than 5 years of experience were put into the beginner's category. Out of a total of 30 contractors interviewed, 16 fell under the advanced category, 11 into the intermediate category whereas 3 of the contractors fell into the beginner's category. The contractors falling in the advanced category were mostly the government contractors, and that is why they were working on the government projects with bigger budgets, as they were more experienced in their field. Similarly the contractors in the intermediate, and beginner's category were the private contractors working on projects with small or below average budgets.

Q - What percent of the project's work is contracted to you (%)?

This question was used to find out the magnitude of work contracted out to the contractors and to investigate as if the contractor is working on a segment/portion of the project or the entire project is being given to the contractor. From the analysis we came to know that 23 contractors were assigned 100% of the project work, 05 contractors were assigned 50% of the project work whereas 02 contractors were assigned 25% of the project work.

Q - What type of a contract have you signed?

The contractors were asked about the type of contract they have signed with the client. the data revealed that more than half of the contractors have signed a fixed price contract, whereas a very small proportion of contractors are working with time

& material contracts. 22 out of 30 are working with fixed price and the remaining 08 are working with time & material contract. the reason why most of the contractors were working on a fixed price contract is because the client in this case does not want to take the risk of price escalations and therefore transfer the risk to the contractors.

Q - What was the contract award criteria?

Data shows that all the government contracts were awarded through open bidding, whereas the private contracts were mostly awarded through past experience and personal references such as friends, family and colleagues. The results show that colleagues referenes and family affiliations has least impact on the government contracts due to open bidding.

Q - Was the selection of contract type your (Contractor) choice or principal's (Client) choice? If it was your choice then please explain why you chose this type of a contract?

The results show that the selection of the contract type in both private and government projects was purely client's choice and the contractors has no say in it. It was generally revealed by most of the contractors that the client in Khyber Pakhtunkhwa is more price sensitive, and therefore will try to transfer all the risks associated with the project to the contractor. Moreover the data shows that the client has an upper hand in every project as the contract selection is purely dictated by the client. Contractors stressed the need for a strategic relationship between the client and contractor.

Q - Have you faced any problems in such contracting with your existing client or previous clients?

Two key concerns have been identified by most of the contractors as a response to this question. According to the contractors time and labor are the biggest issues they face during project contracting. Time plays crucial role in the success of projects however; in this case the contractors face serious problems of timely payments, as the payments are not made in time and the performance of the project is hindered. The contractors explained that although routine monitoring by the client is underway while the project is going on but still the payments for the job that are completed are not made in due time that seriously impacts further work that has to be done. As a result of this client is not happy with the output as it's not usually completed as planned. It is very important to mention that the late payment issues are faced by the government contractors whereas most of the private contractors did not have such problem in contracting. When the reason for late payment to the government contractors was further probed, it was discovered that the government agencies charge their commission on each bill that is cleared for the contractor. A percentage of 12 to 14% is charged on each bill. The contractors explained that charging a commission on each payment is illegal and highly unethical however, it is considered normal in the government projects. The government agencies therefore tend to delay the payments as they consider that charging a commission on payments as their legal right. This is always the major reason for the conflict between the contractors and government agencies. Some of the contractors also highlighted easement problems in projects as the landlord at times is not willing to provide easement to the project site.

Labor issue is mainly highlighted by the private contractors. According to them price escalations during the project are usually not welcomed by the client as a result of which the client is not willing to pay extra for the increases that takes place in the labor rates during the life of the project. This in turn, effects the project's completion because the labor is not willing to work on the existing rates and leads to labor unavailability.

Q- How do you manage escalations (price increases) during the life of a contract?

The results from this question shows that most of the contractors be that private or government rely heavily on prior project agreements for escalations. According to the contractors, data for escalations is available at the Bureau of Statistics and is also issued by Pakistan Engineering Council which is available on their website. These two are responsible agencies for publishing such data keeping an eye on inflation, demand supply, etc. As far as the government contractors are concerned they have the escalation clause included in prior projects agreements for projects that exceed a year. For the projects that are for one year there is no escalation approved by the government however projects that are for more than a year are allowed to recourse to escalations for compensation. The escalation is allowed in the second year and so on, the rates as we move ahead into future increases with every successive year till five years. The inclusion of the escalation clause in prior project agreement help contractor's hedge against price changes in future, and therefore the project moves undisturbed

towards completion. As far as the private contractors are concerned, they also rely on prior project agreements (escalation clause) for managing such issues. In addition some of the private contractors also mentioned that they make contracts based on labor rates and the materials supply is the client's responsibility which reduces their concern for price escalations.

Q- How would you define/explain trust in the context of project contracting?

Quite a number of definitions came up as a result of this question. The definitions by different private and government sector contractors cover a wide range of concepts that comes within the jurisdiction of trust. For example one of the contractors answered this question as

“Past experience is what creates trust”

It is evident from this definition that past track record and experience has a significant role in the creation of trust among the contracting parties. If the contractor

has a good track record in past he will be able to get more contracts than a person who is not experienced. Similarly some defined it as

“Good quality of work and fulfilling tender terms and conditions”

Now this definition suggests that good past experience is not enough to have trust created with the client. It takes more than past experience, the quality of work that is delivered in the current project and meeting customer specifications is what creates trust between the contracting parties. Quality in here is a relative term and equally applies to maintaining quality in time i.e. completing project on time, meeting quality in cost i.e. completing project within specified budget and meeting quality in scope i.e. delivering what is required is what facilitates the creation of trust.

Others added that using the right kind of materials in the project adds to the customer satisfaction and trust. Some emphasized that monitoring the progress of a project on a daily basis also creates trust. Being punctual in the project completion is also considered as a contributing factor towards the creation of trust.

Q- What are the factors that facilitate trust during contracting?

A number of factors have been identified by the contractors that facilitate trust during project contracting. According to some of the contractors trust is facilitated / enhanced to a greater extent when the payments to the contractors are made in due time as a result of which contractors then also put their effort in the project and try to

“Project completion on time and Work on agreement basis”

The analysis of the responses clearly shows that trust is facilitated by both the parties to the contract i.e. the contractor and the client. Ignorance on either side could spoil the essence of trust in the project for example timely funding issue is concerned with the client so the client has a role to play in here in order to facilitate trust whereas the use of skilled labor is the issue linked with contractors and it also play a role in the process of trust facilitation. So it is two way traffic and that is why some of the contractors believe that mutual cooperation and prior agreement on all project issues facilitates trust and reduces the chances of conflict and litigation.

A 7x7 grid visualization showing word embeddings for the sentence "The project was bad because the material was misused and it took too much time and work." The words are represented as circles at specific coordinates:

- material**: (2, 6)
- misuse**: (5, 6)
- work**: (0, 4)
- quality**: (6, 4)
- project**: (1, 2)
- time**: (5, 2)
- bad**: (3, 0)

The main themes that have been identified in this section are broadly the time factor and quality factors. According to the contractors time is of supreme importance in projects and therefore, a failure to complete the task in time impedes the development of trust. It then takes a very long time to regain the trust once developed. The contractors therefore try their best to complete the projects in time. Another factor that is closely associated with time is the lack of commitment with the project. According to some of the contractors, trust between the client and contractor is greatly affected when the contractor is unable to give sufficient or due time to the client's project because of busy schedule or other commitments elsewhere. It makes the client feel that the project is not a priority to the contractor and the client therefore feel ignored.

The second theme that came up as a prominent impediment to the development of trust is quality. According to the contractors the clients are extremely disgruntled when they discover that the materials that are in use in the project are not of good quality or desired requirements. Similarly it is displeasing for the client whenever materials are wasted or misused in the project.

As already mentioned the process of trust is two way traffic and these were some of the factors that are initiated by the contractors however there are also some factors that impedes the development of trust from the client's side. For example one of the interviewee to this question replied that,

“Project delay and no timely funding from Client side”

So trust can be hurt by the client due to non-availability of required funds in time. The contractors face serious project delays when funds are not released in time. This results in the contractors not trusting the client anymore and therefore they then avoid working with the same client in future. In a way past history plays an important role in the selection of contractor and client as well, bad experience with a client discourages contractors to work with the same client in future, in the same way a bad experience with the contractor discourages the client to work with the same contractor in future. So past experiences has an impact on future.

Living up to the expectations of the client i.e. working according to the contract terms and conditions add to the creation of trust. The use of inexperienced staff and unskilled labor is another factor that can have serious consequences on the client contractor relationship.

Q- How would you manage your project differently if the client stops trusting you?

Agreement and work were the two major themes that appeared as a result of this

question. According to most of the contractors especially the private ones, the work on project is usually stopped when the client stops trusting them, and the contractor is paid for the work done and the project is considered terminated since then for the existing contractor. Some of the private contractors explained that they try and start giving more time to the project in such situations, further they also try and add more labor and more experienced staff to the project in order to regain the lost trust.

The government contractors on the other side explained that they have no other option when the client stops trusting them but to work according to the contract prior agreements. According to one of the government contractor,

“In case of government contract there is no trust, you will work according to the agreement whether you are willing or not. You may leave the contract in the beginning but once you have started the work then you are required to complete it otherwise you will be fined and your license will be cancelled”

The above statement clearly shows that the government contracts are carried out in highly adversarial relationship as there is not trust and contractors are required to abide by the contract agreements. They are fined heavily if they fail to deliver the required quality and in some cases their licenses are cancelled as well. This statement shows that the government has the bargaining power for some reason, and they can easily manipulate the contractors the way they want. The government contractors have an option to cancel the contract in the beginning in which case the work is usually retendered.

Both the private and government contractors however; explained that they first try to involve a third party in such situation, so they make an attempt to resolve the conflict through the involvement of the third party or arbitrator. But the situation

in some instances is worse and the private contractors leave their project whereas the government contractors may end up into litigations or else face heavy penalties.

Q - What do you do in a situation of mistrust between you and the client?

Work and contract came up as two major themes as a result of this question. According to most of the contractor's private or government, it was stated that mistrust with the client is mainly treated by third party mediation. The grievances from the client's side are notified to the contractors and vice versa and are eliminated if genuine.

Some of the government contractors identified another very important point about the projects that are carried out in tribal areas; according to them the conflicts arising in such projects are resolved through the involvement of the political agent of the concerned agency. Some added that the elders of the area are involved into the project, elder's means Jirga system is followed in most of the tribal areas to resolve issues arising in the project. The elderly and respected people of the community are requested to conduct Jirga to resolve the issues in the project.

Q - Do you think trust precedes a contract or is it that contracts precedes trust?

The analysis of this question came up with two astonishing results. All the private contractors claim that trust precedes contract. They believe that a contractor is only able to get hold of good projects when he/she has well past experience with the client. The repeated selection of the contractor is therefore contingent upon good relationship and experience with the client.

The government contractors on the other side claimed that contract precedes trust. They were of the opinion that trust is automatically created when the contract is awarded to a contractor. Some were of the opinion that there is no trust in the government contracts. This means that past history has least impact on repeated selection of the contractor in the government sector. The contract terms and conditions

in a way force the parties to the contract to perform well, specifically the contractor otherwise penalties are awarded as a consequence.

5. General Discussion

Literature shows that trust plays a role in the procurement process of construction projects. Contract type is selected based on the level of trust and understanding between the contracting parties, which also mean that trust at times precedes a contract and at times proceeds a contract. The purpose of this study was to take up the above issues and investigate them in one of the most under privileged provinces of Pakistan. From the above two categories of respondents i.e. the government sector contractors and the private contractors it can be inferred that clients and contractors in the private construction industry rely more on relational approach which is mostly based on trust and building long term relationship. That is why the contracts that were observed in the private sector were mostly flexible with adjustment mechanisms in there. Whereas, in case of the government contractors it was observed that the contracts are more standardized and predetermined, with less flexibility and adjustment mechanisms. It was observed on the government side that the client is not interested in creation of trust or long term strategic relationship rather their interest is to get their work done by any means. The contracts on the government side therefore included punishment mechanisms like penalty clauses etc.

Literature says that the relational contracting is very much in use by most of the countries these days because of the benefits it offers to the users. Our results are in conformity with the literature as far as the private contractors are concerned, however, the results seems to negate literature in case of the government sector contractors. This study has implications for further research. As the study was conducted on a

small scale and focused on a sample from one province, therefore generalization becomes an issue. Further research is needed if it has to be generalized for the entire country. In addition, it needs to be investigated as to why is the government sector not interested in building long term strategic relationship with the contractors. Is there lack of awareness regarding the benefits of such an approach or is it that the government has some other vested interests in such contracts. Finding out answers to such queries will certainly help the country devise effective and more efficient strategies for dealing with the contractors and will lead towards the government funds utilized much productively.

6. Conclusion

From the above analysis it is obvious that trust has a role to play in the success/failure of contracts within the construction projects. It can be concluded that trust can be looked upon from two perspectives. One is the trust of the contractor upon the client and the other is the client's trust upon the contractor. The mutual trust between the contractor and client was found to have an impact on the overall project performance. The major contributing factor in the creation or deterioration of trust from the contractor perspective is the timely release of funds to the contractor. Whereas, the use of quality materials, experienced and skilled staff, project completion on time and proper devotion of time by the contractor for the client's projects were found to be the major contributing factors in the creation or deterioration of mutual trust. Further it was also observed that the selection of the contract type is purely the client's choice in both government and private contracts. It is interesting to note that most of the private contractors were of the opinion that trust precedes contract whereas all the government contractors believe that contract precedes trust. The statement by the two groups of contractors clearly shows that the private sector contracts follow the relational contracting approach, where the contractors are selected based on their previous experience (good/ bad) with the client. In cases where the client did not have previous experience with the contractor, have relied on references from friends and family. The government contracts on the other hand follow the classical approach. The government sector approach is in conformity with the Williamson' (1985) theory about the trust in contracts which says that contracts precedes trust and that the contractors are in a way forced to trust after the contracts have been awarded to them. Mostly standard contracts with a lot of penalty clauses are used in the government sector which shows that the contractor's behavior controlled through the clauses in the contract. This point to an adversarial relationship between the client and contractors, and shows that trust has less to play in the government sector.

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