

CLAIMS IN INTERNATIONAL CONSTRUCTION PROJECTS IN ETHIOPIA and CASE STUDIES ON SELECTED PROJECTS

Abebe Dinku and Girmay Kahssay
Department of Civil Engineering
Addis Ababa University

ABSTRACT

With the advent of the liberalization of the economy and availability of funds from international financiers, there has been a surge of large-scale civil engineering construction in Ethiopian construction industry. While this large scale investment in the construction sector has been a major step in the right direction, this venture has been beset with unfortunate incidences of claims ranging in millions of Birr and sometimes even in excess of 100% of the project costs. Claims are demands for money and/or time extension that a contractor rightly or wrongly believes he has a right to. Whilst claims are an inevitable fact in the construction industry, future handling of such incidents will have to depend on developing a healthy understanding of their occurrences and formulating a strategy of minimizing risks associated with it. The objectives of this paper are, therefore, to investigate the causes of potential claims and to propose a possible mitigation as to the handling of similar incidents in the future. In addition to literature survey, questionnaires based studies were made to identify the causes of claims in Ethiopian construction sector and interviews were also conducted with various parties of the sector. The paper attempts also to analyze case studies and points out remedial measures, to reduce their impact. One of the main observations of this research work has been the fact that the Ethiopian construction industry seriously lack qualified engineering professionals with an appropriate level of training in construction management, international contract administration and claims handling. Finally the findings of the study are discussed and recommendations forwarded.

Keywords: amicable, arbitration, claims, client, conciliation, consultant, contractor, disputes, mediation, negotiation, settlement.

INTRODUCTION

Ethiopia has a rich history of magnificent construction endeavors. The obelisks of Axum, the rock-hewn churches of Lalibela and the castles of

Gondar are a few examples of this expertise. With the advent of modern civilization, particularly during the reign of Emperor Menelik, there have been some significant developments in this regard, the Addis-Djibouti railway line being one living example. During the Italian occupation of the 1930's there were some construction activities, particularly in the development of long trunk roads. After the Italian occupation and before the 1960's, expatriate contractors generally dominated most of the medium and small civil and building projects. The experiences, as well as the financial benefits were almost exclusively in the hands of foreigners [1]. Eventually local construction companies owned by Ethiopian professionals were established. It was, however, a long time before such companies were able to penetrate the international construction market or to be accepted by international financiers for international competitive bidding.

Following the nationalization of many private construction companies in early 1980's and lack of international financing for the construction sector, there was a significant decrease in the number of major civil engineering projects in the country. After the change of government in 1991, however, a noticeable increase in construction projects covering about 30% of the national GDP, was observed in the construction sector. The sector attracted foreign financing as well as participants of numerous international contractors and consultants. For instance, the Ethiopian Roads Authority (ERA) currently runs about sixteen projects financed through international bilateral agreements executed by international contractors and consultants, with fifteen more in the pipeline. The Ethiopian Civil Aviation Authority (ECAA) runs about four internationally financed projects while the Addis Ababa Roads Authority runs the Addis Ababa Ring Road Project (AARRP) under construction by the China Road and Bridge Construction Company (CRBCC).

According to Bunny, a contract is called international if the parties concerned have their places of business or habitual residence in different states [2]. The two important factors, which give

projects an international feature, are procurement of services from foreign companies and the financing of such ventures from foreign financing agencies. Hence the term, "international projects" is used. International projects are usually financed by foreign donors or funding agencies who require that loans be disbursed according to their guidelines. Many current major civil engineering projects in Ethiopia are financed through loans with bilateral or multilateral financial arrangements with international agencies such as the World Bank, the African Development Bank, etc, covering a major portion of the financial requirements whilst the Ethiopian government normally covers a small portion of the total project cost, which is usually in the range of 10-15%. One of the major requirements of the international financing agencies such as the World Bank is that projects submitted for funding must be implemented by contractors who are to be selected through "International Competitive Bidding".

In addition to the requirements of the funding institutions, it is normal practice in the construction industry to utilize a form of internationally recognized contract documents that are acceptable to both parties. In this regard, the FIDIC form of contract has been widely accepted and is currently a widely used form of contract administration document in the international projects being implemented in Ethiopia and endows the Engineer to settle differences, or in some cases to give decisions on disputes that may arise.

CLAIMS IN CONSTRUCTION PROJECTS

In general claims in construction industry are defined as demands for compensation in terms of money or time extension or other or a combination of these that a party rightly or wrongly believes he is entitled to. As part of their unique nature, civil engineering projects are prone to claim issues. No matter how carefully drawn the contract documents may be, situations can, and usually do arise, which were not as anticipated by the parties [3].

Most of the time claims are inevitable in construction projects. They may occur when the conditions of the contract change in such a way that the contractor is unable to recover expenses and profits. In other cases, when the provisions of the contract documents and specifications lack clarity, a correct interpretation of the documents may result in extra expenditure, which a contractor is forced to cover through claims.

The causes of claims are many and varied. Depending on the particularities of site and geographic location they may have differing causes and impacts. In most cases they are undesirable, as they impact project cost, time of completion, etc. The fact that claims are unavoidable, effort should be made to encourage the development of resolution mechanisms, to the benefit of all parties. In such cases, the best approach is not to have a hard line approach towards their resolution but create an atmosphere of partnership between all parties with the objective of solving or settling the issues.

The Ethiopian construction industry seems to exhibit a rather reserved attitude towards the understanding or handling of claims. In order to avoid ambiguity in the handling of claims, the FIDIC form of contract sets out in clause 53.1 detailed procedures for claims [4]. These include that the contractor:

- a) give his intention to claim within 28 days after the event giving rise to the claim has first arisen.
- b) keep contemporary records on the claim issue.
- c) submit detailed particulars of the amount claimed and the grounds upon which the Claim is based.
- d) that the Engineer examines such contemporary records and makes determination based on the available contemporary records.

CLASSIFICATION OF CLAIMS

Claims may be made on the basis of many causes and contexts, some of which may be the following.

- a) Claims within or outside the provisions of the contract (those made within or outside the provisions and stipulations of the contract documents).
- b) Claims in Tort (from *Tortum*-latin for wrong) is concerned with civil duties. For instance, excessive dust, noise, vibration, fumes come under this category.
- c) Quantum Merit claims ("as much as it is worth"): Quantum Merit claims are claims where work has been done but no contract or price has been agreed. Then it may be claimed that the work should be valued and paid for what it is worth.

- d) **Ex-gratia claims** These are claims made with no foundation in the contract or at law but only in a sense of "fairness" or equity.
- e) Claims concerning disruption and delay due to designs or on site handover/rights of way.
- f) Claims concerning weather conditions, importation issues, etc.

The above claims classifications are further elaborated in detail in standard literature.

IMPACT OF CLAIMS

At best claims are undesirable. Besides incurring unwanted legal expenses, they strain the relationship between the parties to the contract and affect the working atmosphere. Each party may see the other as an adversary, which affects the future of the work, and can result in the parties being defensive. In such atmosphere more claims may be inevitable. This eventually affects the work and may result in many types of impact, some of which are discussed below.

Financial Impact of claims

The most significant effect of claims in international projects in Ethiopia has been the financial impact. In some projects there have been financial claims reaching up to 200-300% of the project cost. If this could have been avoided it would have meant a significant saving of public money.

Impact on Project Completion Time

The other effects of claims on project execution involve time extensions, which affect project completion. In the various international projects being carried out in Ethiopia, there appears to be a common perception of accepting time extensions more favorably than increased financial expenses.

Of all projects surveyed in this study, none have been completed on time. Rather all of them have been granted a time extension. Whilst time extensions may appear to be necessary in some cases, few, if any, professionals view the issue of time extensions as a serious claim case. In this aspect it is necessary to instill in the minds of the practicing Engineers and consultants that time extensions do also incur additional cost where the income or revenue that may have been obtained from a timely completed project is lost.

Other Effects of claims

Another significant effect of the claim process is the effect it may have on the project execution itself. Once the claim issues are referred to arbitration, the parties begin to see each other as opponents and that will have a far greater impact, probably more severe than the financial impact may have on the total project life. Therefore whilst maintaining a firm stand in the handling of possible claim cases, responsible bodies should endeavor to maintain an atmosphere of good working relationship in the interest of the project

DISPUTE RESOLUTION MECHANISMS

In general the purpose of claims by contractors is to seek additional money over and above the contract prices and/or extra time for the completion of the project. For the Client, however, it means additional costs, which in the end may at times make a project commercially unviable. Such a differing interest in the execution of a project will inevitably lead to disputes. Considering the unavoidability of such problems, dispute resolution mechanisms are placed in many forms of contracts. Current dispute resolution mechanisms stipulated in the FIDIC forms of contract place the Engineer/Consultant as the central element who is expected to act impartially when the contractor places his claims at his jurisdiction. Should both parties consider the decision of the Engineer to be fair then they will agree to settle the issue. If one or both parties, however, do not accept the decision of the Engineer, then an alternative dispute resolution mechanism is instituted. This usually leads to negotiating amicable settlement or finally to arbitration.

In order to avoid a complicated costly and time consuming arbitration proceedings, parties to a contract may institute in their contract documents, as an option of claim settlement, an Alternative Dispute Resolution (ADR) mechanisms which may include [2];

- a) Direct Negotiation
- b) Mediation
- c) Conciliation
- d) Mini-trial procedure
- e) Claims review board (CRB); and
- f) Pre-arbitral review board

In the event the above options fail, Arbitration proceedings may then follow.

ASSESSMENT OF CLAIM AWARENESS IN ETHIOPIAN CONSTRUCTION INDUSTRY

It is understood that the free market economy practiced in Ethiopia has created a better opportunity for participation of local and foreign investors in the construction sector. Over 1400 local contractors of different categories have now registered by the government authority. The financial, technical and managerial capability of the majority of the contractors is, however, very limited and could not engage themselves in major projects. Due to these reasons, foreign contractors are taking the lion share of multi-million Birr worth projects undertaking in Ethiopia.

Noting the fact that the Federal Government of Ethiopia is loosing a huge sum of money in claims of various kinds and noting the absence of detailed study on Ethiopian construction industry, in this research work it is attempted to assess the claim situation in the country by collecting information from relevant governmental and non-governmental organizations involved in the industry. The study methodology includes questionnaires based analysis, interviews and discussions with senior level professionals and reviewing of accessible project reports. The questionnaires were designed in three categories to suit clients, consultants and contractors and were distributed to major government clients; consultants and class 1 and 2 contractors [12]. Though not all requested parties were cooperative to respond to the queries, encouraging results have been obtained as shown in Table 1.

Table 1: Summary of questionnaires distributed and collected

Construction party	Distributed question	Collected question	Response rate [%]
Contractors	20	15	75
Consultants	18	12	67
Client	9	5	56

According to the data obtained from the questionnaires, 79% of the respondents reported that the major source of claim is delay and disruption. 58% of the respondents consider variation as the second highest rated cause of claims, while breach of contract is rated as the third cause with 26%.

Delay and disruption in construction works are mainly occurred due to failure of pre-contract planning; inadequate attention being given to projects by contractors in the preparation of tender and by consultants in the completion of projects,

some clients are also responsible since they are changing their ideas quite often and involve in the consultant's duties, etc. It was reported that by examining 15 completed projects in different region of the country the delay encountered ranges from 20-300% of the original contract time [12]. One could imagine the additional money which the client is forced to pay and the financial consequences to the national economy.

Excessive variation orders is also pointed out as the second major causes of claim. It is the belief of the authors that claims due to variations could be minimized if proper attention is given during design stages. It was found in the study that in most of the cases, variation orders are entertained without restrictions. This is mainly due to incompleteness of project designs at the time of bidding and calls for competent services by consultants.

Claims have evolved when the client or contractors break the expressed terms of general conditions of contract. The study indicates that the causes for the breach of contract include: delay in site handover, late approval of payment certificates, changing the scope of the work, bidding error, low contractor's financial and technical capacity, etc.

All in all delays result in additional cost to both the client and the contractor. The loss of revenue or benefit that could have been gained if the project was completed on time, consultant fees which are paid throughout the project, cost associated with head office support of the project are among to be sited as the major costs incurred by the client. On the other hand the costs incurred by the contractors include: additional overhead costs, cost of extension of various bonds such as performance bond and bank guarantee, operational and maintenance costs of facilities.

CASE STUDIES

Claim Details at the Addis Ababa Bole International Airport Project

The Addis Ababa Bole International Airport Project is comprised of 4 projects, which are executed through international funding, contractors and consultants. The following projects were selected for review, due to the fact that all are international contracts and are currently on progress, and where it has been relatively easier to obtain documents and consult/interview professionals involved in the day-to-day tasks. All of the projects had incidences of claims some of which are discussed below [13].

Work Package No.1 Runway Construction (WP-I)

The project initial cost was Birr 164,580,000.00, and was expected to be completed in 24 months. The contractor submitted a number of claims during the implementation of the work. One of the major factors raised by the contractor as a basis for his claims of extension of time was the presence of heavy rains, particularly during the period covering, Jan - June 1998, amounting to about 1600mm of total rainfall. Considering the overall recorded amount, the Client and the consultant agreed that the rains were indeed excessive, and granted the contractor time extensions. Other design related claims were, however strongly countered by the consultant on a *counter claims* basis; whereby the Consultant and the Client argued that they would enforce liquidated damages strategy for the delays incurred by the Contractor. Knowing the financial consequences of such a confrontation the Contractor opted to withdraw all claims.

Although the positions taken by the Consultant and the Client appear to be rather strong, however, the strategy of counter claims has borne fruit. It is simply expressing employers claim in another way and practically avoids claim settlement by arbitration. Experiences indicate that in the majority of cases where claims are taken to arbitration, the contractor, usually foreign contractor, is ended up to be the winner leaving the client at a significant financial loss. Considering this fact, the strong position taken by the consultant and the client has deterred the contractor from vigorously advancing his claim requests. The total amount of Birr 1,283,788.85 paid as a settlement of the contractors claim is in the range of 0.743% of the total cost of the project and is considered to be low.

It can be easily observed, however, that this has not been the case in relation to the time extension requests of the contractor. All in all, the contractor was granted a total of 35 months (or 145. 83% of the original contract period) of time extension. Although the financial compensation appears to be small, the time delay, if calculated on lost revenue, and on the basis of liquidated damages payment of 50,000 Birr/day due to the project not being completed on time, is quite significant.

In this particular project, it has also been observed that the consultant exercised his obligations fairly and efficiently, without unduly pressuring the contractor. This attitude has gone a long way into maintaining an atmosphere of good working

relations, whereby the contractor was sympathetic to the decisions of the consultant.

The timely decisions given to the contractor were largely due to the strong home office back up that the consultant had enjoyed. This fact has enabled prompt decisions to be given to difficult on site problems, and has minimized delays related to design issues

Work Package No. II New Inter'l Passenger Terminal (WP-II)

The project initial cost was Birr 491,150,536.00, and was expected to be completed in 30 months time. The contractor submitted his intention to claim on over 132 issues out of which 18 were directly related to the management issues at the Client's office, whilst the rest of the 114 claims were directly attributable to the contract administration and design issues [6].

Out of these 132 claims only 4 have been settled so far, and a tacit approval for time extension of over 24 months as compared to the 30-month contract period. This amounts to about 80 % of the original contract period. However to date there has not been steps taken to settle the other claims and therefore they are still outstanding. Some of the claim cases are discussed briefly as follows:

- a) The Contractor has submitted a claim for an extension of time with associated costs resulting from the employer's decision to withhold approval of the Performance Security and Advance Payment Guarantee submitted directly from a foreign bank. The Consultant, after due consultation with the employer and the Contractor has determined as required under the terms of Clause 44.1 of the Conditions of contract, that the claim has no merit as the employer was not acting unreasonably in withholding such approval. However, the contractor threatened to take the case to arbitration on the basis that because of the delay in approval of the advance payment he was forced to use his own funds in order to progress the works and hence has the right to be compensated for the costs he incurred. The Client in the interest of avoiding costly arbitration expenses opted to settle the issue amicably through the payment of about one million USD.

b) Claims On Environmental Mitigative Measures

The contractor claimed that, as a result of the type of selected fill used in all areas of the airport construction work, it was necessary to supply extra machinery to keep the dust down so that the public was not inconvenienced and that aircraft safety was not jeopardized. He further alleges that the work he has had to undertake in this respect is far in excess of what could have been expected at the time of the tender due to the nature of the materials being used for selected fill. The client and the consultant believed that the contractor had a valid point in this regard and that compensation for the cost of deploying extra machinery was deserved. This issue was settled with the consent of all parties and an additional payment was granted.

c) Claims on the space frame structure on the terminal building

The original design of the roof framing for the new terminal building consisted of channel type steel sections placed 1.5m center to center from a proprietary trade mark called "Uni-Strut". The payments for this work were to be based on an actual installed weight basis. During the execution of the contract, however, the contractor proposed an alternative ball and socket joint, tubular section type of steel truss roof space frame. Upon reviewing the alternative the consultant concurred with the contractor's alternative proposal and sought the Client's approval. The Client noted that since the new alternative was to be placed 3m center to center (in contrast to the original design of 1.5m center to center) there was a reduction in weight and hence a saving, and instructed the Consultant to take measures to account for the financial differences. No further correspondence was recorded after that. However, after 40% of the roof frame was installed the contractor discovered that the total weight of the roof structure was to be less by about 44% (from what was recorded in the bills of quantities) and hence anticipated that the payments may be reduced by a proportionate amount.

Considering the financial disadvantages of this reduction in weight the contractor argued that there should not be any reduction in costs, and insisted that he should be paid for the full weight of what is recorded in the bills of

quantities. The consultant, approved the payment of the full BOQ amount regardless of the actual installed quantity.

d) Claim for on late site handover

The Contractor has submitted a claim for an extension of 227 days (25.22% of the total project time) under the terms of Sub-Clause 42.2 of the general Conditions of Contract as a result of the failure by the client to give possession of part of the site. The Contractor contends that by failing to give access to the apron and taxiway in good time, he was unable to proceed with the airside works as programmed. The detailed analysis of the Contractor's program of work shows that the delay in giving possession (a delay attributable to the employer) has an effect on critical path activities and results in the completion date for the Apron Phase 2 and Taxiway B being extended by 42 working days. The claim was accepted and compensation guaranteed.

Work Package No. III (WP-III) Nav-Met-Com & Associated Facilities

The form of the contract signed for this work package is a turnkey form of contract. The contractor however experienced significant delays in the supply of electro-mechanical equipment, as well as the construction and commissioning of the New Control Tower. Therefore, although the contractor had a number of claim issues, he has refrained from submitting them, because the Client may demand compensation on the form of liquidated damages due to the excessive delays. The work is still on going.

Work Package IA Rehabilitation of the old Runway and Aircraft Parking Apron

The contract was awarded with out the complete detailed designs, and hence the contractor was unable to start work immediately. Coupled with that, the site handing over was significantly delayed resulting in the submission of a claim by the contractor for extension of time and associated costs. After intense negotiations the contractor withdrew his claim on the condition that, should the Client create any further delay he will raise this issue again, and work has then commenced. The total claim was for a period of 2 months, which is about 33.33% of the total contract time. Currently the total amount of claims is unknown.

The quantitative summary of the above claim issues is presented in Table 1.

Table 1: Summary of selected claim cases at the Addis Ababa Bole Inter'l Airport Project

No	Description	Addis Ababa Bole International Airport Project			
		WPI	WPII	WPIII	WPIA
1	Initial contract price	164,580,000.00	491,150,536	200,670,076.6	45,000,000.00
2	Variation orders	10,690,703.47	46,787,182.31	-	-
3	Submitted claims-financial	1,283,788.85	132 no.	-	-
4	Certified claims-financial	1,283,788.85	> 6 mill.USD	-	-
5	Final project cost (birr)	176,554,492.30	514,551,983	200,670,076.6	-
6	% of claims (of tot. cost)	0.73%	Unknown yet	Unknown yet	Unknown yet
7	% of foreign currency	70%	90%	86%	-
8	% of local currency	30%	10%	14%	-
9	Initial contract duration	24 months	30 months	19 months	6 months
10	Submitted claims -timeext.	35 months	Unknown yet	Unknown yet	2 months
11	Granted time extension	35 months	36 months	19 months	-
12	% of time extension	145.83%	120%	100%	-
13	Final project duration	59 months	Ongoing	Ongoing	Ongoing

In summary the following points are noted:

- a) claims due to the late handing over of the site has been a common occurrence in all four projects.
- b) Granting time extensions appears to be more acceptable than financial compensations.
- c) in all four projects variation works have been issued resulting in financial claims and time extension demands due to design issues.
- d) a strong employers claim in the form of counter claims strategy has been observed in at least one project.
- e) a tendency to settle claim issues through negotiation/amicable settlement has been observed. In one project a backlog of unaddressed claim cases have also been observed.
- f) in some cases the client has went ahead and settled claim issues (more out of the desire to avoid Arbitration proceedings) even though the consultant had a different opinion.
- g) the successful experiences of one consultancy-firm managing one project has not been applied on the other projects. Had this been done, a better claims management may have been instituted.

Claim details at the Addis Ababa Ring Road Project (AARRP)

Some of the major claim issues submitted by the contractor for the Addis Ababa ring road project are discussed below.

In their report of September 2001 the contractor China Road and Bridge Corporation (CRBC) argued that the principal delays have been caused by factors beyond the contractor's control. In aggregate, up to May 15, 2003 the contractor has submitted, claims worth over 220 Million Birr or about 47.93 % of the total project cost and requested for time extensions of over 1063 days (or 97.1 % of the total contract period). Up to the writing of this article the contractor has been granted a time extensions of 950 days or about 89.37% of his demand. The submitted financial claim amount to about 220 Million Birr of which the Engineer certified 63 Million or about 28.64% whilst the Client rejected partially the financial demand and approved only 26 Million Birr or a total of 11.82% of the contractor's demand which is about 41.27% of that certified by the Engineer. This indicates that the Ethiopian construction industry management, particularly clients, tends to see time extensions more positively than financial claims. Other claim issues have also been observed and the aggregate summary of the cases are presented as follows:

- a) about 33% of the cause of critical delays is attributable to the late handing over of the site.

There has also been a significant delay due to design changes, modifications and lack of sufficient details. The information given in the pre-tender period appears to be rather optimistic and has not considered the seriousness of the ensuing problem. It appears that the client did not perceive the gravity of this problem and the related consequences.

- b) the remaining critical delays, i.e. lost traverse points and adverse climatic conditions, cover about 13% of the total critical delay.
- c) although the establishment of a joint committee of the various government agencies responsible for services in the vicinity of the works was a positive step, it seems to have not been fruitful in the avoidance of claims.
- d) a counter claims strategy, either by the consultant or the client has not been developed.

In some cases the client appears to oppose the decisions of the consultants in the award of claims. Whilst this may have a valid ground, the consequences of such a position appear not to have been considered. In the event that the contractor opts for arbitration settlement of a dispute the final outcome may not be favorable.

Claim Details at some selected Road Projects

Currently the Ethiopian Roads Authority (ERA) is implementing over 16-major road projects. All of these projects are financed through bilateral funding. In the near future, there will be about 15 similar projects for which financing has been obtained and work is expected to start soon. International consultants manage all of the above projects with international contracting firms carrying out the construction works. The ERA carries out and oversees the overall administration of the projects. As could be obtained from reports and related information, the ERA has faced a significant amount of claims from some contractors.

After examining project reports, and interviewing professionals involved in the projects the following main points have been drawn [8,9,10]:

- a) one of the most critical and frequently appearing problems seems to be those related to late handing over of site/rights of way problems. It appears that contracts are awarded to tenderers with out completely clarifying the rights of way problems. This has caused a

number of disputes, time extension and financial claims, and has affected the timely completion of projects.

- b) difficulties associated with late issuance of drawings and related information are frequent occurrences in many of the projects. Late issuance of instructions as well as under certification of interim payment certificates have also contributed to the incidence of claims. Design changes in the middle of the construction work have resulted in the incidence of claims. Not only is this an undesirable action but also indicative of the level of completeness of design documents. Delayed response to contractor's claims, or related technical issues have been one factor observed in the study. The ERA in its internal report of the Debre-markos-Gondar project quotes this to be a major problem.
- c) In one project the Contractor claimed time extension and compensations of additional costs for the great difference between the actual site conditions and the conditions which he expected while referring to the bidding documents during the preparation of its tender. This may be indicative of incomplete bidding document preparation by the consultants. It may as well be due to lack of detail investigation by the contractor during tender preparation.
- d) The involvement of the Client in settling or giving a final decisions in the issues of claims, although it may not be advisable, on the basis of the FIDIC form of contract, has been observed to happen.
- e) The lack of sufficient and properly trained manpower in the contract administration of the projects has been one key problem. This has also contributed to delegating the handling of the claim issues to the legal department. In the future this may need to be handled in cooperation with the engineering professionals having adequate training in contract administration.
- f) The concept of professional indemnity insurance to cover consultancy risks or design errors is not widely known nor is it implemented in these projects. This encourages consulting firms to transfer the costs related to claims involving design or contract administration errors to the Client. In addition to the above, some consultancy teams have

contributed inadvertently towards the deterioration of an amicable atmosphere between the Client and the contractor. Unnecessarily strict contract administration contributes towards a hostile environment whereby the contractor has no desire to settle issues amicably but prefer arbitration instead.

- g) Delay in importation of explosives, for the exploitation of quarries for road works and that of communication radios have also contributed toward claims in some of the projects. Delays due to customs clearing of goods at the port have also been a major claim issue. The contractors claim that unreasonably long clearing time for imported goods was a cause of delays and associated expenses. Lack of appropriate transport facilities for moving imported items from ports inland has also been a cause of claims.
- h) Rights of way problems have contributed significantly to the incidence of claims. Unclear obstruction where such belong to different government agencies (for instance removal of electric poles which belong to the power corporation). The coordination of the removal of such obstruction has significantly increased the risk of delays and associated claims.
- i) Inadequate/inaccurate soil investigation reports or survey data's have contributed toward the incidence of claims.

The incidences of claims as related to some selected road projects considered in this article are summarized in Table 2. More data is also available in literature [12,13,14].

Table 2: Summary of claims at some selected road projects

No	Description	Chidda-soddo	Hirna-qulubi	Woldiya-Alamata	Betemariam – Wukro
1	Initial contract price		188,084,957.20	150,329,634.00	203,410,054.65
2	Submitted claims birr (financial)	32,420,743 (USD)	22,240,254.25	7,151,534.60	-
3	Certified claims (financial)		3,093,801.26	-	-
4	Final project cost		188,084,957.20	-	-
5	%of claims (of tot. cost)		11.83%	157,481,168.60	-
6	Initial contract duration	36 months	913 days	36 months	36 months
7	Submitted claims (time ext.)		539 days	23.8 months	11 months
8	Certified claims (time ext.)	14 months		10.33 months	3.62 months
9	% of time extension	38.9%		28.7%	10.1%
10	Final project duration	50 months	On going	-	-

BEST PRACTICES AND LESSONS LEARNED

Some of the best practices that have been observed in the analysis of this study indicate that:

1. the establishment by ERA of the disputes review expert (DRE) was a good start at finding an alternative solution to addressing claims.
2. the attempt to settle potential disputes through negotiation and amicable settlement has been observed to be one of the best practices at the Addis Ababa Bole International Airport Project.
3. all projects appear to be behind program. This indicates that the factors that have gone into deciding the project completion time limit may not have been realistically estimated.

At the Addis Ababa Bole International Airport New Terminal construction, it was attempted to increase the project time limit to reflect realistic local factors. This needs to be pursued further in other projects.

4. a strong counter claims strategy like the one exercised at the Addis Ababa Bole international airport new runway construction is worth considering as a possible alternative claim mitigation method since it enables to decrease financial claims significantly.

PROPOSED CHANGES TO THE FIDIC FORMS OF CONTRACT

The FIDIC form of contract is prepared in light of international contracts held in the developed world. In the context of developing countries, the documents may need to be slightly modified to take account of the local conditions.

Although the FIDIC form of contract takes this into account by providing a section for "conditions of particular application" this section is normally prepared by consulting Engineers, which are in most cases foreign consulting firms and may not have detailed information about prevailing local conditions. Therefore the following recommendations are forwarded to modify certain sections of the FIDIC form of contract.

a) Instruction To Tenderers

A unified instruction to tenderers document needs to be prepared for all Ethiopian projects. In case of variability, such a document may be prepared by sector, for instance for road works, for water works etc., including details with respect of Validity of tenders, Currency regulations, Rates of exchange, expatriate and local staff taxation requirements, Tender security, performance bond sources, importation issues etc.

Tender evaluation criteria need to be defined clearly and form a part of the tender documents, so that transparency is maintained and all participating tenderers are aware of the evaluation parameters.

b) The FIDIC form of contract

- i. *Clause 2.1 duties of the Engineer:* the duties of the Engineer in the authorizing of variation orders or settlement of claims need to be limited to a given percentage of the total project cost. Otherwise such decisions need to be carried out following the approval of the Client.
- ii. *Clause 7.3 responsibility for contractor prepared drawings:* this article needs to be elaborated more clearly specifically with respect to the contractor's responsibility, and the possibility of design reviews.
- iii. *Clause 10 performance security:* the requirements of the performance security as regards to an acceptability and financial strength of a source, needs to be clearly spelt out.

iv. *Clause 41.1 adverse weather conditions:* the wording of this clause does not give particulars of what an adverse weather condition means. Defining a particular weather condition or the amount of rainfall in comparison, for instance to, the average amount in the previous 5-10 years will avoid subjectivity.

v. *Clause 48.3 substantial completion:* the wording of this clause is ambiguous and subject to interpretation differences, therefore the term needs to be described clearly.

vi. *Clause 51 issuing a variation order:* the authority of the Engineer to issue variation orders seems to be open ended. Such a provision gives the Engineer a free hand in the financial matters and may not be preferable. Therefore a financial limit needs to be included. In the event that the variation orders passes such limit, then the Engineer may be required to seek the approval of the employer.

CONCLUSIONS

The analysis of the above data appears to suggest that the Ethiopian construction industry lacks an appropriate guidance and training on the handling of claims on international contracts. The exchange of information between government agencies handling international projects regarding the incidence of claims, their occurrence; causes and steps taken to minimize them are nonexistent.

One of the major findings of the above claim related study is the rights of way and site handing over problems. All the projects analyzed in this study have experienced this problem making it a prime claim point. This appears to stem from inadequate understanding of the requirements of the contract, and the impact it may have on the overall project execution. As the exclusive responsibility of the Client, the consequences of this problem can be avoided with proper advance planning, and correct understanding of contract administration. In addition to this, most projects have experienced significant design changes that have been a cause for further claims.

The ICB procedures recommend that priority be given to international consultants in the supervision and contract administration of projects, on the assumption that local consultancy firms may lack the necessary experience. It may be noted, however, that the expatriate consulting firms also do lack the

necessary expertise and practical experience. In essence, therefore, the reasoning that local firms are less experienced to handle major projects may have to be reconsidered.

The contract provisions do not include references to minimum wages in the employment of local staff/workers. There have been occurrences of claims and work stoppage due to labor unrest in some of the projects. This has stemmed from the fact that no clear guidelines have been issued to contractors related to this during the pre-tendering stage of the projects.

Reviewing the above details the one issue that is significantly evident is the unavoidability of claims. In order to minimize this occurrence, the first step needs to be creating an increased awareness on the unavoidability of claims in the management of international projects in Ethiopia. In addition to these, understanding claims in a positive way goes a long way to creating an understanding of their existence and eventually creating a positive atmosphere towards their resolution.

The main form of contract that is widely used in the Ethiopian construction industry is FIDIC, which may not be widely known or understood in the Ethiopian professional circle. In this aspect the rather inadequate understanding of this form of contract has contributed towards the frequent occurrence of claims. This is very evident in the significant occurrence of site handover related claim issues.

RECOMMENDATIONS

Based on the analysis and findings of the study, the following recommendations are forwarded. The recommendations are aimed at the government Institutions running international projects, academic Institutions training professional Engineers as well as practicing professionals and consultancy firms.

1. The lack of trained manpower involved in the contract administration of the projects and construction law has been a key problem. Therefore, a much more coordinated effort of training professionals needs to be carried out, through the strengthening of engineering management courses both at the undergraduate and postgraduate levels, with an emphasis on international contract administration, construction contract law, as well as international arbitration and claims handling procedures. It is necessary to recognize that, unlike general commercial disputes, construction controversies are special, requiring for their efficient disposition, a unique blend of legal knowledge, technical understanding, and experience. For practicing professionals recurrent training courses or skills development seminars need to be held frequently. Steps taken in this area will most likely result in the handling of claims realistically.
2. Most financing agencies require that bid documents be reviewed by an international consultant. In relation to this, establishing a local team of professional design review experts will go a long way towards enhancing local skills in handling as well as minimizing claims. In instituting the design review procedures great care must be made to enforce the responsibility of the final designs to the consulting firm, so that any outcomes of the review and modification exercise be accounted for and that the inherent avoidance of ownership of the designs be avoided. Such a step will create a sense of responsibility and accountability in the supervising consultancy.
3. The current requirement by international financiers, towards awarding consultancy service contracts to international firms needs to be reviewed, in light of the fact that international firms need to share their skills with local consultancy firms.
4. The concept of professional indemnity insurance to cover consulting risks or design errors is not widely known nor is it implemented in Ethiopia. The responsible government agency needs to institute a professional indemnity coverage regulation, for both local and international firms participating in the Ethiopian Construction Industry.
5. Selecting competent consulting firms with a track record of good project management is essential. The emphasis on selecting consultants based on least cost needs to be reviewed carefully. This will avoid involving less competent consultants, which may increase the incidence of claims in the project.
6. Investing in proper pre-tendering work planning towards obtaining sufficient soil and survey investigation data's with the objective of producing complete design documents. This requires tender documents to be specific on

how detailed investigations have to be done so as problems will not be created during tender evaluation.

7. It is known that importation of various construction materials or accessories is handled via customs offices. It is therefore necessary to create awareness in the offices of the Ethiopian Customs Authority, possibly through creating an alternative importation-handling department specifically for the execution of international projects.
8. The design of any work needs to include a detailed analysis of rights of way problems and clearly specify the steps to be taken. All government/private institutions then will have to contribute towards facilitating rights of way issues and avoidance of rights of way claims. Again creating awareness about claims and delays in the execution of projects, among concerned government institutions, needs to be carried out.
9. All pre bid information shall be all inclusive, detailed and exhaustive as regards to informing the contractors on issues related to customs clearance regulations, work permits, taxation, minimum wages and labor related information and other legislation. It is necessary to prepare a detailed information bulletin that needs to be issued to all contractors as part of a bid document. Such information availability will assist contractors to weigh their risks and hence price their bids appropriately, thereby minimizing the risk of potential claims. This does not mean, however, that contractor's don't have to properly execute their duty and responsibility independently prior to bid submission.
10. Weather related information should be made available in the bidding documents and what the average weather conditions for the given locality were in the last reasonable years (~10 years). There should also be a daily record of on site rainfall amounts, as part of the contract requirements, to be agreed between the Engineer and the contractor. Such information should include the time of big and small rains in the country their duration and intensity. This will prepare the contractor to sequence his works appropriately and minimize the risk of subjective interpretation of the adverse weather conditions and avoid, if possible claims. In this aspect a development of metrological stations will play a crucial part. At the moment all available records are obtained from the metrological authority, and these should be augmented by on site observations.
11. In one of its internal studies carried out in 1999 the ERA has suggested the preparation of a "Good Practice Guide". Whilst this is an excellent idea and may enhance the effective handling of claims related issues it is nevertheless in the stage that may need to be developed further.
12. Creating partnership between all parties of a contract is also an alternative in avoiding an adversarial approach between all parties, in addition to this creating a claims "think tank" of local experts, and an independent body of mediators possibly arbitrators or *Alternative Dispute Resolution (ADR)* mechanisms, such as a board of claims experts endowed with the powers to mediate on issues of international claims.
13. Strengthening the employers claims capability, where the client is in a better position to demand claim against the contractor by enforcing liquidated damages, for delayed project completion time will assist in deterring the contractor from assuming a more aggressive approach in claims. In this line the role of the consultants needs to be strengthened.
14. Enforcing a mandatory pre-qualification of contractors for major civil engineering projects will assist in weeding out less experienced contractors, and encourage the participation of more qualified ones.
15. Formulating a local bid evaluation procedure that will be enforced in all government agencies handling international projects will contribute towards streamlining bid evaluation related claim issues.
16. Creating efficient exchange of information between government agencies handling international projects so that experiences gained from past and present claims are shared.
17. Further research work on more claim cases are suggested and arranging forums of discussions among parties in construction sector is crucially important to save public money and upgrade professional commitments of those involved in the construction sector.

ACKNOWLEDGEMENTS

The authors of this article would like to thank government and private institutions and individuals who have contributed tremendously in the research work by providing access to important documents and sharing their view during interviews, respectively. Above all, the contributions and collaboration of the following institutions is highly appreciated: Ethiopian Civil Aviation Authority; Ethiopian Road Authority, the China Road And Bridge Corporation.

REFERENCES

- [1] Abate, B., Proposed Affirmative Action For Building The Capabilities Of Domestic Contractors, EACE Bulletin vol. 1, No. 2, pp. 23-27, Jan 1999.
- [2] Bunny, N.G, The FIDIC form of contract, Blackwell science, Oxford, England, 1991.
- [3a] Marsh, PDV, Contracting For Engineering And Construction Projects, Gower Publishing Limited, Hampshire England, 1992.
- [3b] O'Leary, F. A., Construction Administration in Architectural Practice, McGraw Hill, Inc. New York, 1992.
- [4] FIDIC, Guide to the use of FIDIC 4th edition, 1989.
- [5] ECAA, Final Report: A.A.B.I.P Works Package I, May 2002.
- [6] Quarterly Report no. 16: A.A.B.I.P Works Package II, May 2002.
- [7] Management Of international projects, Proceedings of a Conference by ICE 14-15 November, London, 1984.
- [8] ERA, Monthly progress report: No.34, Woldia -Alamata Road Project, Jan 2003.
- [9] Monthly progress report: No.39, Harar-Qulubi Road Project, Jan 2003.
- [10] Quarterly progress report: No.36, Awash-Hirna Road Project, Dec. 2002.
- [11] Addis Ababa Ring Road Project (AARRP): Interim Submission No.6 September 2001.
- [12] Abdissa Dessa, Claims in Ethiopian Construction Industry, MSc thesis, Civil Engineering Department, Addis Ababa University, February 2003.
- [13] Girmay Kahssay, Claims in International Projects in Ethiopia, MSc thesis, Civil Engineering Department, Addis Ababa University, July 2003.
- [14] Construction Industry News, EACE Bulletin Vol. 3, No.1, pp.73-79, Sept. 2001.
- [15] Cox P.A., Civil engineering Project Procedure In The EC (proceedings of the institute of civil Engineers) Thomas Telford, London, 1991.
- [16] Hawker, U.T., et. al., The Institution Of Civil Engineers Arbitration Practice Thomas Telford Publishers, London, 1986.
- [17] Sawyer, G.J et. al., The FIDIC Conditions Digest Of Contractual Relationships And Responsibilities, Thomas Telford, London, 1985.
- [18] Jones, P.G., A New Approach to the ICE Conditions of Contract, The Construction Press Ltd, Horn by Lancaster, 1975.
- [19] Han, H.S., et. al., Approaches For Making Risk-Based Go/No-Go Decision For international projects, Journal of Construction engineering and Management, July/August 2001.
- [20] Metropolis P., et.al., Model; For Understanding, Preventing and Resolving Project Disputes, Journal of Construction engineering and Management, May/June 2001.
- [21] Kululanga G.K. et. al., Construction Contractors Claim Process Framework, Journal of Construction engineering and Management, July/August 2001.
- [22] Kangari, R. et.al., Construction Surety Bonding, Journal of Construction engineering and Management, May/June 2001.
- [23] The WORLD BANK, Guidelines Procurement Under IBRD Loans and IDA Credits, 1995.

[24] Haswell, C.K et. al., Civil engineering contracts, practice and procedure, Butter Worth Pub., London, 1989.

[25] Heisler, S.I., The Wiley Project Engineers Desk Reference. John Wiley And Sons, Inc. New York, 1994.

[26] ICC, Rules of Arbitration, 1988.

[27] Civil Code of the Empire of Ethiopia, 1960.

[28] Hughes, G.A et.al. Claims In Perspective, Longman Scientific And Technical, London, 1983.

[29] The Reporter Newspaper: Vol. 8 No. 28/394, Megabit 15, 1995.

[30] The Addis Zemen Newspaper: 62nd year No.5, Meskerem 5, 1995.

[31] Conditions of contract for Construction, FIDIC 1999.

ACKNOWLEDGEMENTS

The authors of this article would like to thank government and private institutions and individuals who have contributed tremendously in the research work by providing access to important documents and during their view during interviews. Above all, the contributors and collaboration of the following institutions is highly appreciated: Ethiopian Civil Aviation Authority, Ethiopian Road Authority, the Clean Road And Bridge Corporation.

REFERENCES

[1] Abate B., Proposed Alternative Action For Building The Capital City Of Domestic Commerce, EACE Bulletin vol. 1, No. 2, pp. 23-27, Jan 1999.

[2] Bony, N.G. The FIDIC form of contract. Blackwell science, Oxford, England, 1991.

[3] Mans, PDV, Contracting For Engineering And Construction Projects. Gower Publishing Limited, Hampshire, England, 1991.

[4] O'Leary, F. A. Construction Administration in Architectural Practice. McGraw Hill, Inc. New York, 1991.

[5] FIDIC, Guide to the use of FIDIC 4th edition, 1989.

[6] ECAA, Final Report: A.A.B.I.P. Works Package I May 2001.

[7] Quarterly Report no. 10: A.A.B.I.P. Works Package II May 2001.

[8] Management Of incremental projects: Proceedings of a Conference by ICE 14-15 November, London, 1994.

[9] ERA, Monthly progress report No.24, Works-Amanas Road Project, Jan 2001.

[10] Monthly progress report No.29, Harar-Gulubi Road Project, Jan 2001.

[11] Quarterly progress report No.26, Amhar-Gulubi Road Project, Dec 2001.

[12] Addis Ababa Ring Road Project (AARRP) Interim Submission No.2 September 2001.