



**AN INVESTIGATION INTO THE CHALLENGES FACING BUILDING
CONTRACTORS AT VARIOUS STAGES OF THEIR EXISTENCE IN
FINANCING PROJECTS**

A CASE STUDY OF CONTRACTORS WITHIN NAIROBI AREA

BY

SHUNET, K. MESHACK

BO3/9166/2004

University of NAIROBI Library



0341210 3

**UNIVERSITY OF NAIROBI
ADD LIBRARY**

**A PROJECT PAPER PRESENTED IN PARTIAL FULFILMENT FOR THE
AWARD OF THE DEGREE OF BACHELOR OF ARTS IN BUILDING
ECONOMICS & MANAGEMENT, DEPARTMENT OF REAL ESTATE
AND CONSTRUCTION MANAGEMENT, SCHOOL OF BUILT
ENVIRONMENT**

UNIVERSITY OF NAIROBI

JULY 2008

DECLARATION

Researcher's declaration

I, SHUNET. K. MESHACK, hereby declare that this project is my original work and has not been presented for a degree in any other university.



.....

14th / 07 / 2008
.....

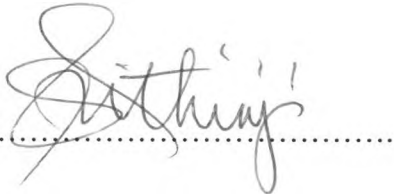
Signed

Date

SHUNET. K .M

SUPERVISOR'S DECLARATION

This project has been submitted for examination with my approval as university supervisor.



.....

11/7/2008
.....

Signed

Date

Mr. N. B. KITHINJI

Acknowledgement

I wish to express my heartfelt gratitude to all those who contributed in various ways to the completion of this study.

Special thanks to my supervisor, Mr. N.B Kithinji, for the massive role he has played in shaping this piece of work and for his constructive criticism without which this paper would not be what it is.

Special thanks also, to the lecturers in the department of real estate and construction management for their contributions during presentation seminars and personal consultations which helped in shaping this paper.

Thanks to the class of 2004, you made life in campus enjoyable. Finally, to all those people who took time off their busy schedule to respond to my questionnaires and interviews, thank you.

God bless you all.

Dedication

This project is dedicated to my Parents Jackson and Lucy Shunet for being there for me and to all my siblings; Saidimu, Soila and Robert.

Table of Contents

TITLE..... i

Declaration..... ii

Acknowledgements..... iii

Dedication..... iv

Table of contents..... v

List of tables..... viii

List of charts..... ix

Abstract..... x

CHAPTER ONE..... 1

 1.0 Problem and its setting 1

 1.2 Problem statement 3

 1.3 Hypothesis..... 5

 1.4 Study objectives..... 5

 1.5 Scope of the Study 5

 1.6 Significance of the study 5

 1.7 Limitations of the study..... 6

 1.8 Assumptions of study 6

CHAPTER TWO 7

Litreture Review 7

 2.0 Introduction..... 7

 2.1 Project life cycle..... 7

 2.2 The Building process..... 8

 2.21 Pre-contract stage 8

 2.22 Construction stage 9

 2.23 Maintenance period 9

 2.3 Tendering and contractor selection 10

Contractor selection 10

 2.31 Open tendering 11

 2.32 Selective tendering 11

 2.33 Negotiated tendering 12

2.34 Serial tendering	13
2.35 All-in-service/package deal	13
2.4 Project participants	14
2.41 The client	14
2.42 The multi-disciplinary construction consultants	16
2.43 Role of the builder/contractor	19
2.44 The public Agencies	19
2.5 Contractual arrangements	20
2.51 Types of contractual arrangement	20
2.6 Contract documentation	22
2.61 Composition of contract documentation	23
2.7 Sources of finance	24
2.71 Savings	24
2.72 Donations from friends and relatives	24
2.73 Partnership	25
2.74 Other self-finance	25
2.75 Borrowings	25
Types of borrowings	26
2.8 Contractor's cash flow	28
2.81 Cash flow calculation	28
2.82 Establishing contract budgets	29
2.83 Forecasting the contractors income	29
2.84 Retention	30
2.85 Liquidated damages	31
 CHAPTER THREE	 35
Research Methodology	35
3.0 Area of study	35
3.1 Sampling Method	35
3.2 Data collection	36
3.3 Data	36
3.4 Independent Variables	36
3.5 Dependent Variables	37
3.6 Data Analysis	37

CHAPTER FOUR.....	38
Data Analysis And Presentation.....	38
4.0 Introduction.....	38
4.1 Projects investigated.....	38
4.2 Project type and purpose.....	39
4.3 Type of developer and method of procurement.....	41
4.4 Retention conditions.....	43
4.5 Professionals in construction firms.....	45
4.6 Projects undertaken by the firms under study.....	45
4.7 Source of finance.....	46
4.8 Factors affecting progressive performance.....	49
4.9 Problems encountered in the field.....	53
 CHAPTER FIVE.....	 54
5.0 Conclusion of main findings and recommendations.....	54
5.1 Conclusion of main findings.....	54
5.2 Recommendations.....	56
5.3 Areas of further study.....	56
 BIBILIOGRAPHY.....	 57
APPENDIX A.....	58
APPENDIX B.....	66

List of Tables

Table

4.0 Distributions of projects by type and purpose.....	39
4.1 Distribution of projects by client and purpose	40
4.2 Type of developer and preferred method of procurement.....	41
4.3 Scoring of developers on awarding of tenders to beginning contractors.....	41
4.4 Intervals at which payments are made to contractors.....	42
4.5 Periods taken to process payments.....	42
4.6 Percentage deduction of retention monies.....	43
4.7 Construction firms by registration categories.....	43
4.8 Firms upward mobility in registration category.....	44
4.9 Firms by registration category.....	44
4.10 Initial categories of firms under study.....	45
4.11 Use of professionals by construction firms.....	45
4.12 Allocation of projects done to the number of firms under study together with the number of failed projects.....	46
4.13 Reliability of different sources of finance by construction firms.....	47
4.14 Factors affecting contractor's progressive performance.....	51

List of charts

Charts

2.1 An illustration of a contractor's cash flow.....	31
4.13 An illustration on the response for reliability of various sources of finance by different firms.....	48
4.14 Allocation of grades to various factors affecting progressive performance for the period under study.....	52

ABSTRACT

The capital cost of a construction project is a concept that should be considered by parties involved in a building project. Adequate capital enhances good contract performance with regard to the production of projects that are compliant with the parameters of a construction process that is; budget, time and quality.

Construction industry is a leading sector in creating employment opportunities. Thus it is important that contactors, who are the major participants in this industry; have an environment that is conducive for them to facilitate their growth, to enable them create employment opportunities and to be an efficient organisation.

This study is aimed at establishing the stage of existence that building contractors experience severe financial constraints. A period of twenty years of contractors' existence was analysed in four quarters each comprising a period of five years; first five years, second five years, third five years and the last five years. Questionnaires, that had differentiated questions for different periods under study, were distributed to contractors for them to express the stage at which they experienced severe financial constraints and also express the effect of these constraints on contract performance. The researcher established that these factors affected contractor's performance in a longitudinal pattern. Poor performance was identified to be at the initial stage and a remarkable improvement was noted as time of existence progressed. Thus the researcher came up with a conclusion that financial constraints are likely to discourage newcomer contractors into the industry.

The researcher recommended that prospective builders should have adequate seed capital before they start construction business. This will enable them finance construction works easily at their initial stage of existence and also enable them to have a good plan for growth which in-turn make them to be competent contractors.

CHAPTER ONE

1.0 PROBLEM AND ITS SETTING

1.1 Introduction

Building contracts come into existence when two parties, namely the employer and the contractor, come into an agreement for a building process. A building process is divided into three major stages; pre-contract, construction and maintenance stage.

Pre-contract stage entails the process of procuring the building to be constructed. This process is finalized by selecting a credible contractor to undertake the works. Construction stage commences soon after contractor selection and it entails the interpretation of the architects design into the built environment by the builder. Maintenance stage follows practical completion of a project, a contractor is liable for defects occurring within the defects liability period and thereafter the client takes the maintenance role.

The capital cost of a building project is a concept that is always considered by clients involved in various projects. This is meant to enhance the process of financing the entire building operations. Financing a building project implies the arrangement of adequate funds to finance the development and construction of a specific project. A client is therefore expected to have adequate funds to assist a contractor in financing the building process.

Clients seek finance from financial systems and markets that comprise of institutions that facilitate financial intermediation between different economic units in the society. However, not all developers qualify to access funds from the financial market, banks and financial markets finance only projects that are viable and with rates of returns well above the cost of funds. Other emerging methods of finance for projects include bonds, multilateral financial institutions and international financial market

A developer on acquiring funds to initiate a project will consider procurement rules in choosing a contractor who is suitable for the intended project. This is to enhance good contract performance with regard to quality, cost and time, thereby ensuring that the developer attains the maximum value of his invested money.

Construction industry is characterized by a large number of building contractors who indulge in this business for various reasons: Some are attracted into the industry because they see existing contractors, who are probably doing well, driving big cars, thus they make an assumption that it is an easy way of making money.

Construction business may take different directions. There is the possibility of failure of a contracting firm often because of poor management. Secondly is the possibility of muddling along due to lack of ambition. Thirdly is the possibility of unplanned expansion normally for contractors who take advantage of luck or an expanding national economy. And lastly, there is the direction of planned growth for competent contractors who set up goals and objectives for their firms.

A competent contractor can be described as an asset to a country's economy and to the society as well as to the contractor's family and friends. Other than the idea of making profit, a contractor is expected to grow, create employment opportunities and to be an efficient organization among other objectives. To achieve these objectives, the contractor will always need working and investment capital in the process of contract performance.

Clients facilitate financing of construction projects through the following ways;

- Initial site mobilization payments, this applies for the private sector jobs only and not the public sector:
- Progress payments based on costs that are made on the basis of costs incurred by the contractor as work progresses.
- Interim valuations certificate, these are performance-based payments made on the basis of performance measured by objective, quantifiable methods, accomplishment of defined events, or other quantifiable measures of results.

The question that strikes the researcher's mind is whether these financing methods are satisfactory to starting contractors.

Contractor's project expenses are grouped into two, i.e. initial costs and operating costs. Initial costs include; - mobilisation of workers on site, purchase or hire of equipment, erecting site buildings (e.g. site offices and stores), installation of

utilities and payment of premiums for indemnity insurance, performance bond, insurance covering the works e.t.c.

Operating costs include; - salaries and wages, maintenance and upkeep of machinery, payment for materials including pre-payment, cover periods in-between contracts when no income is coming in and as a back up in situations where the client is late in making interim payments.

Sources of funds for contractors are mostly short-term. However, beginning contractors often find it difficult to get a lender; this is because of the perception that many lending institutions have towards building contractors. Experience over the years in many different countries has shown that builders often lead the list of bankruptcies and liquidations. This general reputation for lack of credit-worthiness means that even the better firms in the industry have to face the fact that lenders will be doubtful of their loan application.

The existence of payment chains allows for the use of trade credit. However, it is important to note that contractors repay these funds with interests which are charged on the amount(s) outstanding to the bank. Use of bank overdrafts comes with certain risks which if unforeseen can lead to financial disaster to contractors

1.2 Problem statement

A lot of people have researched on matters relating to financing of contracts. Alfred Khangati in his project; the implementation of public projects, talks about financial planning in conjunction with the implementation of construction projects, his research is intensively based on clients financing the building process. Same case applies to Edgar Mokuwa Whose research was meant to seek the causes of clients delaying payments.

Wachira .I.N. also did a research on problems facing indigenous contractors in Kenya. Her study emphasis was that, financial problems are peculiar to indigenous contractors only in as much as their effects and magnitude is concerned. Other projects include those of *Wangui W.G. financial constraints and the African contractor*, Magare S.O. *indigenous contractors business financing* and Gichu .W.

among others *who investigated the causes of poor financial management of building projects by indigenous contractors*. All these researched on matters pertaining contract financing but with regard to the African and or indigenous contractor.

In addition to these was Ngaamba; who did an investigation into the viability of commercial paper as an alternative method of financing contractors but which he states to be of beneficial to the big contractor. These past projects illustrates that indeed there exist financial constraints among building contractors.

To expound on contractors financial constraints, is an article that appeared in the daily nation on 12th September 2006 Mr. Max Mogere managing director of Masaso Construction Company was quoted saying that “contractors who fail to seek ways of to refinance putting up of buildings may wind up as overheads have risen by a very high margin”. He says that contractors have to secure bid bonds before embarking on projects in which they are again deducted 3% withholding tax, a deduction of 10% as retention fund and an incurrence of 5% as a result of indirect costs in securing bid or performance bond. He ultimately states that contractors invest alot of money and resources but they in turn get thin return.

The researcher therefore questions himself, as to whether these financial difficulties are likely to discourage newcomer contractors in construction industry, irrespective of whether a contractor is categorized as African, indigenous or non-citizen.

The researcher intends to conduct a study to find out the financial constraints among building contractors at different stages of existence. This will be done by investigating the financial difficulties in a longitudinal order that is, from the time when a company was incorporated henceforth as it conducts its construction operations. The researcher intends to establish the stage at which the companies experience enormous financial constraints. Hence the study is narrowed down to centre the under mentioned hypothesis.

1.3 Hypothesis

Financial constraints are likely to discourage newcomer contractors in the construction industry, irrespective of whether a contractor is Indigenous, African or Non African.

1.4 Study objectives.

The primary objective of the study was therefore to establish the stage of existence at which, building contractors experience severe financial constraints. In pursuing this, the study was also set out to fulfill the following objectives

1. Identify financial constraints among building contractors that are unique at the initial stage.
2. To establish the effects of financial constraints on contract performance at various stages of contractor's existence
3. Offer recommendations based on findings with regard to financial constraints among contractors.

1.5 Scope of the Study

The study was intended to cover building contractors of all categories as per the Ministry of public works. The researcher was specifically interested with contractors who had on- going projects in Nairobi to enhance the possibility of interrogating the contractors and developers involved in those projects.

The area of theory that the researcher was dwelling on was that of project finance and management.

1.6 Significance of the study

This research will help identify the stage at which building contractors experience severe financial constraints. The study will further illustrate how these constraints affect project performance at the respective stages. This will enable appropriate measures to be taken to make construction business dependable in creating employment opportunities to the society at large.

1.7 Limitations of the study

The researcher limited his research upon the building contractors with on-going projects within Nairobi; to be precise those areas were construction projects neighbouring The University of Nairobi main campus, projects within the CBD and those ones in Upper-Hill/community area. This was because these areas were characterized by quite a large number of projects e.g. construction of social, residential and renovations of commercial buildings. The researcher further considered time and financial constraint and therefore considered these areas that were near his school.

Questionnaires were only be administered to contractors and the respective developers to the projects under study.

Respondents to questionnaires were given a period of one week to return the questionnaires due to time constraint.

1.8 Assumptions of study

The researcher bears in mind that all contractors are businessmen and thus their main intention of indulging in construction industry businesses is to make profit.

CHAPTER TWO

LITRETURE REVIEW

2.0 Introduction

Establishing oneself as a contractor requires more than just knowledge of construction work. Proper financing of the venture is very essential or else one may be in trouble before he or she starts a project. Financing a project is therefore very important in project development; it simply refers to the arrangement of adequate funds to finance the entire building process

A contractor intending to do a project must therefore know how much capital is required, what the cash needs will be and more so, he should have alternatives in case things go contrary to his expectations.

Under this chapter, the researcher has reviewed; textbooks, journals, and past projects among other sources of secondary information to generate an overview of financing building projects. The purpose of this is to enable the researcher to formulate the research topic and ultimately design questionnaires for fieldwork survey.

2.1 Project life cycle

Generally, a project life cycle sub-divides the scope of work into a sequence of stages. Most projects go through a life cycle, which will vary with size and complexity of the work thereby drawing different attention at different stages of construction.

The life cycle is therefore a path from origin to completion of a construction project. It is important as it helps in the identification of the activities required to provide the anticipated outcome. Life cycle also refers to a framework for dividing the management cost of work in to manageable packages that march with the various stages of the building process. This enhances management and financial control of a project.

2.2 The Building process

Building contracts come into existence when two parties, namely the employer and the contractor, come into an agreement for a building process. The employer initiates the whole process by first appointing the design consultants and thereafter playing a vital role in selecting the contractor with whom to enter into a contract.

Generally, a building process has three stages namely;

- Pre-contract stage
- Construction stage
- Maintenance stage

2.21 Pre-contract stage

This stage starts with the client who comes up with a decision to build. Through the advice of land developers, the client acquires land for erection of the intended development. The client then briefs the architect of his intended project.

The Architect on understanding the clients brief, transfers it to paperwork to make initial sketches. The Quantity Surveyor takes the sketches and prepares a cost estimate for the proposed project. If the employer accepts the estimate, he sets a cost sealing

The architect then makes necessary adjustments, and thereafter prepares a detailed working drawing. The quantity surveyor uses the detailed drawings to prepare bills of quantities, which forms the basis of tendering. Interested bidders purchase the tender documents from the procuring entity.

Tender document refers to all-important information concerning the proper contract in relation to rules, conditions e.t.c. Supplied to the contractor so as to enable him price the works as accurately as he may taking into account all the special peculiarities which every building project posses. The contractor's quantity surveyor quotes a price for the tender, the top management of the construction firm makes the final adjustment regarding make up. The procuring entity then opens the tenders in the presence of bidders. Lastly, the Quantity Surveyor does the tender

analysis and with enough consultation with the architect, recommends the best contractor.

2.22 Construction stage

The contractor interprets the architect's drawings into the built environment by putting the resources together, to achieve the set objective as per the contract terms of cost, quality and time.

Variations and alterations made by the client and architect during construction stage and their value in terms of cost should be determined. The work of the contractor is paid through several interim certificate payments, this are initiated by the contractor's quantity surveyor who prepares valuations of work done and materials on site, either on monthly basis or as stipulated in the contract. The valuation report proceeds to the professional quantity surveyor for approval. The approved valuation proceeds to the architect who drafts a certificate of payment, and the client or his representative pays the contractor.

Payment certificate during construction comprise of, interim certificates, penultimate certificate and the certificate of practical completion. Penultimate certificate is normally released with the first moiety of retention, and the latter denotes practical completion and it is given to the contractor upon the architect's satisfaction that the relevant building works are completed. Maintenance period starts from this point.

2.23 Maintenance period

This period starts after the architect has verified that the building is practically completed, and the defects liability period can start. Defects liability period is normally six months from the time of practical completion, a contractor within this period is liable to make good any defects that arise during this period. The final account comes last after defects liability period and the final certificate released.

2.3 Tendering and contractor selection

A tender is an offer by a party to provide a service or materials to carry out a specific piece of building construction work under specific conditions for a fixed amount of money within a fixed period. Tenders are invited as means of determining which contractor undertakes the works for the lowest price.

Contractor selection

There are various methods employed in selecting a suitable contractor for a given project, some of the principle matters to consider while doing the selection include:

- The firm's financial record and standing.
- Whether the firm has had recent experience of building at the required rate of completion over a comparable contract period.
- The firm's general experience and reputation in comparable areas of work.
- Whether the management structure of the firm is adequate for the type of contract envisaged.
- Whether the firm will have adequate capacity at that relevant time.

These considerations are necessary if the employer is to prepare and keep a list of pre-qualified contractors. The list is however, subject to periodic adjustments to kick out those firms that are deviating from the expectation of these considerations and admitting new firms who qualify to be short-listed in the light of the laid down characteristics

Construction business is often thought to be highly profitable, but in reality it is highly competitive.

The following are ways of getting business in the construction industry;

- Bidding on public works against other bidders
- Bidding on private work against a selected list of bidders
- Negotiating for work

Most contractors start construction business by fighting in the competitive bids. After doing the first job(s) and showing skill, integrity and responsibility a

contractor can graduate to the level of selected bidders lists and then on to negotiated works.

2.31 Open tendering

This method of contractor selection is open to any contractor who feels he is capable of performing the works of a project and is ready to submit a price bid. The method allows fair competition among registered contractors to tender for construction works. Ranking of bidders is done upon opening of tenders, this is followed by tender analysis and then awarding of tender is done to the contractor found to be most credible. This method of tendering provides a chance for beginning contractors to win tenders.

This method of tendering is common for the public sector jobs. However, most private developers do not prefer this method because there is the risk of getting the lowest tender from an inexperienced contractor, the cost of tendering is also very high because there are many contractors tendering and lastly, tender analysis takes too long.

2.32 Selective tendering

This is a method of selection where a certain number of contractors are selected and invited to tender. The following are the two approaches that are used.

The first approach is through the local press; where applications are invited from certain category of contractors to tender for a particular project (briefly described). These ways, contractors who are not in the said category, say C or B and above are discriminated against and therefore only those who qualify can tender.

The second approach is where the client looks at a list of pre-qualified contractors and picking on a number that looks desirable, say six contractors, the quantity surveyor or project manager then writes to them requesting them to tender for a particular project. The employer in this case is faced with the advantage of obtaining favorable tenders, since the few contractors chosen are reputable, moreover, tendering and tender analysis cost are substantially reduced.

The disadvantages in this case affects the client, this is because tender sums are generally higher than what it would be in open tendering; contractors behave differently when they know that it is only a specific category tendering. Collusion is possible especially when the number of bidders is much reduced and they happen to know one another. This method of tendering also erodes the level of competition and its associated benefits. Beginning contractors are not likely to benefit from this type of tendering simply because; selective tendering discriminates against inexperienced contractors.

2.33 Negotiated tendering

Sometimes the client has to do without competitive tendering and chooses to negotiate with one or two contractors. Negotiations are preferred when; a quick start of work is required, the contracting firm has specialist plan or technique that is required for the works, the building industry is overstressed and the contractors are kept busy, there is a good business relation between the contractor and the employer, say based on past relationships. It is therefore essential that negotiations should only exist if the employer is sure he is getting real benefit from it.

Following are the two types of negotiated tendering;

Single stage; this is where the employer nominates a contractor and together they negotiate rates.

Two stage; is where tenders are invited and based on tender sums, the employer negotiates rates with one of the contractors.

Advantages to the negotiated tendering are; the client is capable of retaining services of a contractor who is found satisfactory from the past, there is a tendency of obtaining lower figures than tender sum under normal tendering procedures this is particularly in the Two stage tendering and lastly, cost of tendering is reduced as compared to the earlier methods. The disadvantage to this method is that there is a prolonged wastage of time before actual construction starts.

2.34 Serial tendering

This method of tendering is whereby a contractor tenders for a particular project with the understanding that if he is likely to be awarded that tender, then there will be many more projects that will come his way. For instance a contractor tendering for phase one of an estate comprising of more than one phase will give favourable rates so as to gain the benefits of continuity should he win the tender. In doing succeeding phases, he has the advantage of using same site office, retaining most of his staff; his plant will be occupied throughout; workers will have been used to that kind of work in which case productivity will be higher. There is provision for upgrading the rates over the time for different rates.

2.35 All-in-service/package deal

This method is adopted for projects where the designer and the contractor are the same firm. The client gives the brief on various requirements. Different firms (openly or selectively chosen) will tender based on design and construction. This type of tendering is essential where urgency is paramount and where highly specialized skills in design and construction are only to be found within a particular firm for example a building to house nuclear facilities.

Therefore, before tendering for a project the contractor is normally expected to do an assessment of his financial capabilities to minimize financial constraints when financing the project, should he win the tender. This is attained by;

- Establishing the firms capital structure
- Knowing how the type of work will affect the company's capital required
- Establishing a line of credit
- Establishing a good relationship with its bonding company (banks/insurance companies)
- Establish a competent accounting expertise
- Establishing a proper cash flow system. This is attained by minimizing borrowings because of the high interest rates.
- And lastly, the company should frequently do a financial assessment so as to maintain its financial capabilities.

2.4 Project participants

Project participants need to organize themselves properly and identify their respective roles, the project risks and uncertainties. They should also recognize the need to establish effective lines of communication, which facilitates free flow of information throughout the duration of the project.

The three main project participants are as follows, the clients; who is the initiator, multi-disciplinary construction consultants; who act as the client's professional advisors and a building contractor; who interprets the architect's design in the built environment.

2.41 The client

Being the initiator of the project implies that he is the main person who develops the construction idea. He undertakes a decision to build in the midst of the following environmental forces; political, social, technological, economical, educational, and legal and within a time scale. Thus, he starts by identifying the use potential or creating the need for the facility, this is through a feasibility study. Secondly, he sources the necessary financial resources for the capital and lastly he commissions various construction professionals to build to his ascertained requirements.

Client's role in construction

The client's development aim is met when he commits resources into construction production for own occupation or for investment or for speculation purposes.

Thus, the client before drawing up a development plan should take the following points in to consideration;

- Demand for the product
- Availability and cost of land
- Appointment of professional advisors
- Formulation of the project brief
- Need for quality assurance

For the client to meet his needs and expectations, he has to appoint consultants who fully utilize their skills, experience, and judgment in the following;

- Selecting appropriate procurement methods.
- Translation of the brief in to actual design by the architect
- Reliable initial cost advice by the quantity surveyor
- Definite date for occupation, highlighted in the project schedule
- Low cost maintenance product, this implies a high initial cost
- Suitable contractual methods, this depends on circumstances and therefore, clients expect his consultants to select a method of contract that suits the project strategy
- Adequate contract documentation that will minimize disputes
- Selection of a suitable contractor
- Value of money

Client's responsibilities

Efficient performance of construction professionals depends partly on the client's cooperation and partly on the importance that is attached to the following duties and responsibilities;

Provision of adequate brief

The client is expected to collect and analyze all relevant information and provide adequate statement of requirements that is capable of formulation and development. Inadequate brief complicates the design, causes abortive work, poor documentation, excessive variations, delays, additional costs and poor quality construction product.

Clarity of brief

In order to avoid last minute change of mind the client must give a precise brief. He must also try to limit any variations to the agreed design to a minimum in order to avoid any abortive expensive work and consequential delays to the contract.

Supply of prompt decision

The client should be able to take quick decisions on various matters submitted to him at design and production phases of a project. Such prompt response avoids hold ups and maintains momentums of design and production.

Adequacy of finance

The client should consider financial aspects of the proposed construction project and ensure that adequate funds are available to meet progress and professional service payments. Funds should also be available to honour extra contractual claims and professional fees associated with it.

Disruptions

Client's decisions or actions should not cause any disruptions to the progress of the works. Where the client intends to carry out any section of the works personally, this should be properly planned well in advance of the start of contractors planned production.

Avoidance of interruptions

The client should give liberty to his consultants to make necessary technical decisions that are within their expertise. Frequent interruptions and challenge of such technical decisions because of high cost does not encourage the provision of sound technical advice. In addition, the client should not concentrate on cost cutting actions, particularly in design, which might lead to lack of attention to key activities and good basic detailing.

Land acquisition

The client must consider his or her legal titles or responsibilities regarding the land for the construction project and, where necessary, must engage the services of a legal expert

Insurance

The client must arrange or instruct others to arrange on his or her behalf, any necessary insurance for the construction project.

2.42 The multi-disciplinary construction consultants

It is made up of the following professionals;

Architect

The role of an architect is to interpret the client's project requirements into a specific design or scheme. Design is a function of appearance, composition proportion, structure, and the economy of the product. In addition, the architect performs the function of obtaining planning permission for the scheme.

An established practice is whereby; the architect plays the leading role in the construction process. He collects, coordinates, controls and disseminates project information to all project participants.

In summary, one can say that an architect acts as an agent for all purposes relating to designing, obtaining tenders for and superintending the construction work for which he or she has been commissioned.

The Quantity surveyor

He is responsible for the studies of the economies and financial implications of a construction project and hence he becomes the appropriate professional to advise the client/architect on matters relating to the economies and cost of proposed construction project.

A quantity surveyor comes second, soonest possible after the appointment of the architect, this is however as per the traditional system. The functions of a quantity surveyor are as outlined hereunder;

- Preparation of the preliminary cost advice and approximate estimating
- Preparation of cost plan and carrying out cost studies i.e. investment appraisal, life cycle costing and the like
- Preparation of contract documentation for contractor selection and construction project administration
- Evaluation of contractor's tenders received with recommendations for acceptance or rejections
- Preparation of cash flow forecasts and institution of post-contract cost monitoring/reporting mechanisms
- Valuations of variations that arise as the works proceed and preparation of interim valuations at regular intervals
- Preparation of periodic costs report for the architect or client
- Preparation and agreement of the final account with the contractor

- Evaluation and settlement of contractor's claim for direct loss and/or expenses
- Settlement of contractual disputes.

Roles of engineers

Engineering consultants in a building process include; the structural engineer and the services engineers.

Structural engineer

He acts as an adviser to the architect on all structural problems; such as stability of the structure, suitability of materials proposed, structural feasibility of the proposed design and sizes of structural members for a construction project. As pertaining to the cost of a building, the structural engineer submits his drawings to the quantity surveyor who in turn prepares an estimate for the engineering work.

The Services Engineer

These are specialists in the following works; electrical, mechanical, heating, ventilation, air-conditioning, sanitation, lifts, escalators etc.

The main function of these engineers is to ensure that thermal and visual comforts are achieved effectively. For these reasons, they analyse the client's requirements, prioritise, and advise the architect on the most appropriate design solution.

In summary, the duties, responsibilities of structural and service engineers include the following;

- Providing specialist advice and assisting in the design and construction of a project within the scope of their specialist field.
- Producing calculations to assist in the design, cost planning and the assessment of suitability of materials/components and the like.
- Supervising their respective specialist fields of the project and modifying or redesigning work whenever required.

2.43 Role of the builder/contractor

The primary function of a contractor is to build and organize their considerable resources as a manufacturing organization.

Duties and responsibilities of the contractor commence upon invitation to tender and include the following;

- Carrying out a full site investigation prior to submission of tender to ensure that the bid includes all cost of contractual risks and problems.
- Submitting a priced bill of quantities for examination and/or correction of any errors when required by the architect.
- Planning and programming the works and reprogramming thereafter whenever unforeseen events frustrate the programme.
- Controlling directly employed operatives, subcontractors, suppliers, materials and plant for the execution of the project to the expected programme and cost.
- Coordinating the efforts of all operatives and ensuring that completed works comply with the contract specification and are to the satisfaction of the architect.
- Notifying the architect of information requirement, delays to the construction programme, discrepancy between contract documents, direct loss and/or expense sustained and so on.
- Paying the wages of directly employed operatives, subcontractors and suppliers in time to avoid conflicts over payment.
- Supplying all the information required by the client's professional; advisers for the proper administration of the works.
- Taking steps to carry out the contractor's obligations to rectify all defects on completion of the works.
- Providing post-occupancy repair and maintenance service if so required by the client.

2.44 The public Agencies

These are organizations set up with specific authority either to run public utilities or to provide local services. They include;

- Statutory authority
- Local authorities
- Fire authority

Contractors are required to abide by their requirements in the building process.

2.5 Contractual arrangements

They set out legal relationships that parties wish to establish and, hence, create rights, obligations and procedures for solving contractual disputes. In addition, contractual arrangements in the construction process establish the basis for making payment to the contractor. The factors, which influence the choice of appropriate contractual arrangements, include;

- Size, nature and complexity of development
- Date for commencement and completion.
- The ability to define the client's requirements clearly before contract.
- Adequacy of construction information on which to establish clients cost limit
- Availability of valid adequate construction information on which to obtain tenders
- The scale of changes the client is likely to effect during the construction phase
- State of national and international economies and their effect on the construction market

2.51 Types of contractual arrangement

This should be made known to bidders at tendering stage. The following are the various types of contractual arrangement;

Lump sum contracts

Under this form of contract the contractor, consents to execute the entire work described or specified for a stated total sum. They are based on drawings, specifications, Bills of quantities, agreements and schedule of quantities.

Schedule contract

This form of contract is applicable where there is short time to design the project and produce drawings and bills of quantities. The following documents are used; schedule of rates, agreement and schedule of bills of quantities, specifications and sketches.

Cost reimbursement contracts

This form of contract considers the following factors;

- Material and labor consumed in the project
- A percentage addition to cater for profits and overheads
- In a case where there is urgency and the nature of work is not known
- Cases of small projects like repairs of rooms
- Construction operations are done at odd hours therefore, overtime is catered for.
- *Considerations of time, labour, and input are put in to considerations.*

Serial contracts

This form of contracts occurs when;

- Design is standard
- A case where drawings and bills of quantities are used repeatedly.

The contractor who wins the tender initially has the privilege of pursuing the various phases of the project.

Target cost contracts

Under this form of contact, professionals are not required. However, services of a quantity surveyor are required so as to prepare an estimate and arbitrate only when there is a dispute, he further performs the role of getting the client and the contractor to agree on target cost. Lastly, a contractor under this form of contract is given inducements for work finished on time and penalized for late completion.

Firm or fluctuating price contracts

Decision for the type of contract to be engaged is made at the pre-contract stage.

Firm price contracts: - under these form of contract, a contractor's claim for reimbursement of changes in cost is limited to those relating to statutory contributions, levies and taxes

A contractor under this form of contract is required to allow for all increases and decreases in costs of labour, material and plant that occur during the production phase. This form of contract is best suited for a contract of a short period that has a stable inflationary pressure.

Fluctuating price contracts:- under this form of contract a contractor can claim for reimbursements of changes in costs of labor, material and plant costs as well as statutory contributions. This form of contracts best suits projects of long duration with uncertain inflationary pressures.

Express terms of a construction contract are the following;

The agreement

The conditions of contract

Drawings

Specifications or bills of quantities

Implied terms of a construction contract

These are not written down in a contract but which the law implies.

Statutory terms of a construction contract are imparted into contracts by legislation for example in construction contract the supply of goods and services. Act 1982.

Supplements to standard form of contract

They should be specified to a bidding contractor at tendering stage so that an appropriate financial allowance may be made in their bids to cover any risks associated with their adoption, the following supplements to be considered

Bonds; it is simply a contract of a guarantee. It takes the form of a written undertaking by a guarantor to accept responsibility for performance of a contractual obligation. Performance bond; - it is meant to be a protection against failure to complete the construction project.

2.6 Contract documentation

This refers to recording of the content, terms and conditions in the formal documents of the contract between the parties to a construction contract. Construction contracts therefore govern the erection of a proposed building.

Roles of contract documentation

- Delineates the work in terms of drawings, specifications and bills of quantities.
- Shows client the extent of construction project and gives an indication of the financial and legal obligations before contract
- Reflects the intention of parties and places rights and obligations on them
- It creates a situation, which enables contractors to bid for jobs on the same information and terms without any ambiguity.
- Record of scope of work (price, quality, time, risks, and determination of disputes.)
- Provides a fair equitable legal framework, which ensures that work is carried out in a proper manner and that the building contractor receives payments for works satisfactorily completed.
- A contract document can be submitted as evidence to establish a point in dispute (i.e. failing to comply with rights and duties set out in contract documents)
- Contract document can also be produced in order to prove the existence of a collateral agreement or warranty between parties or among project participants.

2.61 Composition of contract documentation

Agreement or articles of agreement;

This is made up of the agreement particulars between the client and the contractor. It includes; the date, definition of parties' work, definition of the responsibility for the preparation of the drawings and bills of quantities, definition of contract sum, definition of payment time and methods and definition of resolution of disputes.

Conditions of contract

Set out obligations and rights of parties and details the conditions under which the contract is to be carried out. It further provides solutions for problems that can arise during and after construction.

Specifications:

Comprises of material workmanship specifications and performance specifications

Drawings:

Either the Architect and or the engineers prepares these. They illustrate the works to be executed in the contract.

Bills of quantities

This refers to the document drawn up by the quantity surveyor and priced by the contractor to arrive at the contract price.

2.7 Sources of finance

Financing a project means the arrangement of adequate funds to finance the development and construction of a specific project. According to Peter Volpe, establishing oneself as a contractor requires more than just knowledge of construction work, proper financing of the construction venture is essential as well.

A contractor intending to do a project should know how much capital is required, what the cash needs will be, when the payments will be made and he should have alternatives incase things go contrary to his expectation. Hence, they are expected to be liquid to sustain building operations

Sources of finance for projects may be from savings, donations from friends and relatives and by creating partnerships.

2.71 Savings

When a new firm is started, it is very difficult to obtain outside finance. This is because it is at this early stage that the risk of financial loss and failure is highest. A potential lender knows that, if a new business fails, it is likely that the money he has lent will be lost. Yet if by chance it succeeds, he will receive only a relatively small amount of interest. Thus, savings of some kind are vital if a business is to be started.

2.72 Donations from friends and relatives

It is not necessary that all the initial capital should be provided from the proprietor's own savings. He may have relatives or friends who are prepared to help him with

initial capital, he will have to have a clear understanding with them on the length of the loan and when it is to be repaid.

2.73 Partnership

If it is not possible to borrow money for starting capital, it may be necessary to go into partnership with someone who is prepared to put up the money. If some particular type of asset, such as office/yard premises, a truck, or an excavator, is needed to start the business, it may even pay to take the owner of the asset into partnership. Therefore, partnership makes it simple to set up the construction business, it also helps in providing sufficient capital for the construction business and lastly, it makes it easier to acquire money from lenders simply because lenders are often more willing to lend money or give credit to partners as the risk is less. However, there are also disadvantages that must be carefully considered and taken into account, these include; difficulty in operation, if one of the partners is lazy or uncooperative, the others have to carry him and finally, if the partners makes a loss resulting in a debt by partnership, the other partners are legally responsible if one partner cannot pay.

2.74 Other self-finance

The only form of self-finance apart from savings is from profits retained in the business after trading. This cannot apply to a new business, but it is worth bearing in mind if expansion is planned. If the proprietor of the business can limit the amount that he draws from the business in personal expenditure, the remaining shares of profit will help to pay for new plant and to finance increasing levels of work in progress.

2.75 Borrowings

However, a fast-growing business can seldom be fully financed from retained profits. Few successful businessmen are fortunate enough to go right through their careers without ever having to borrow money to assist with expansion. It is far better to recognize this in advance than to be faced with sudden crisis due to unforeseen difficulties on a major contract. Foresight is the essence of good management.

Types of borrowings

Borrowing can be broadly divided into two separate kinds; - long term and short-term borrowing. The sort of borrowing that is sought depends largely on the use to which it is intended to be put. In general, fixed assets can only be funded satisfactorily with long-term loans, while short-term loans can cope quite satisfactorily with a need to finance current assets.

2.751 Short-term finance

It is essential as it maintains liquidity of the firm thus making it operational on day to day basis. Contractors use short-term finance in a number of ways, for instance; paying for work in progress, in the case of on-going work such as construction projects. When much capital is held/tied up to financing an on-going project, the firm experiences financial constraints. Thus, there arises the need to source short-term finance.

The following are examples of short-term finance;

- Bank loan/overdraft
- Trade credit
- Factoring

Bank loan/overdraft

Banks are more prepared to be of assistance to contractors who need to finance their requirements for working or circulating capital. This is because money allocated in this way is not tied up or 'fixed' for years like money used to buy heavy plant and heavy plant and machinery or an office or store. It starts as cash, is used to pay wages, comes back as settlement of an interim certificate, goes to finance materials on site and returns again as cash before to long. The fact that it is likely to come back in the form of cash before very long means that the banker has more chance of seeing his loan repaid quickly.

A builder is usually in greater need of working capital than other businessmen. This comes from the very nature of building. Unlike other forms of manufacturing, in which each individual item is produced in a matter of hours or minutes, construction

projects takes months or even years to complete. Although the client may make interim payments against work in progress, these payments will not usually, be enough to fully finance the heavy cost of materials on site and weekly or monthly wage and salary bills.

Since working capital needs are related to the number of contracts on hand at any one time, it is often convenient to tie borrowings to the need to finance specific contracts. Bank managers sometimes prefer this, since it gives them a greater degree of confidence that the money will be repaid at the conclusion of the contract.

A further advantage of linking borrowing to the requirements of a specific contract is that it enables the finance that is required to be calculated with a reasonable degree of accuracy. A lender of money always has more confidence in the ability of a borrower to pay if he has produced a calculation of his financial needs, since it suggests that he is working to a careful plan.

Trade credit

It essentially means that goods are supplied on credit basis

Factoring

It involves the use of a third party to collect debts on routine basis. Factors may be specialist financial organizations or subsidiaries of more general financial institutions.

Medium-term finance

Wangui .W.G. describes this method of finance as that ranging from 3-10 years. This form of loan is also obtained from banks but at very high interest rate as compared to that one of short-term.

2.752 Long term finance

Long term borrowing is usually the most difficult to find.

This is meant for investment in assets which will be used to enhance profitability in the long term. These assets may include;

- Tangible items or fixed assets such as land, buildings, machinery and vehicles.
- Intangible assets such as goodwill, which may be built up over time.

2.753 Hire purchase

One way of obtaining the use of fixed assets without initial borrowing is to resort to hire purchase finance for plant and vehicles. This is a mixture of buying and hiring which can be quite useful. The contractor pays a deposit and agrees to purchase the item outright at a later date. In the mean time, he has to use the plant, but has to go on making monthly payments until the debt is completed. At the end of the period he is able to buy the plant for a nominal sum and his obligation to the hiring company is completed.

Hire purchase can be very useful to beginning contractors who intend to purchase construction plant. The hiring company naturally includes an interest charge in its hiring rates, and it should be realized that this is rather higher than would be charged by bank. Contractors must however keep these plants profitably employed throughout the period of hire.

2.8 Contractor's cash flow

Financial control and particularly cash flows pose a major problem to a vast majority of building contractors. A general building contractor is concerned about forecasting his cash flow. This helps him in cash control and identifying working capital requirements.

2.81 Cash flow calculation

This 'cash flow' calculation is not as difficult as it might sound, as it is simply a way of working out how much money will be received and paid out at various stages in the contract. If this is known for each week of the contract, it is easy to see the maximum amount of money that will be needed to finance work in progress and how long this money will be needed before the client's payments put the contractor in a more favourable position.

Cash flow calculations are important to the businessman, whether or not he is intending to borrow money. It is possible for a firm to become insolvent, even if it is sure to make good profits on its contracts, simply because it runs out of ready cash. Thus, it is not enough for a contractor to produce a job programme to seek how he could organize a contract. He should go on to calculate the cash flow implications to see if he can really afford to take on the additional work with his available financial resources.

2.82 Establishing contract budgets

A budget refers to a monetary cost plan relating to a period of time, examples of budgets applicable to a contracting organization includes; a forecast of company's borrowings, operating budget, capital expenditure budgets, cash flow forecast, annual sales budget and the overall master budget.

At project level, contractors need to forecast the amount of work they expect to carry each month, and what the expenditure on wages, materials and plant and so on, is likely to be the cost. This facilitates control over payment made by the client under the contract and enables the contractor to assess how the contract is performing.

2.83 Forecasting the contractors income

The forecast of contractor's income from the contracts valuations and the release of interim payment certificate to a contractor are dependent upon the payment terms contained in the various forms of contract.

The overall time period between the date of the interim valuation and payment of the money into the contractors bank account may cover a period of some 28 days, i.e. 7 days between the valuation date and the issue of interim certificate; 14 days payment period and 7 days to receive and clear the payment.

Interim payment is subject to retention as stated in the contract appendix which may be 5% or 10% depending upon on the overall value of the project. The retention is reduced by one half on issue of practical completion certificate and the balance of retention is released on issue of the final certificate.

2.84 Retention

This is the sum of money deducted or withheld by the client from the amount of money due to the contractor for work satisfactory completed.

Retentions are in the form of a percentage, which is stated at tender stage. Full deduction is deducted from the contractor's total interim valuation for work that has not reached practical completion. One-half of this retention is released when works reach practical completion and the remainder released after the issue of an architects certificate of making good defects.

The purpose for deduction;

- Ensuring that the works will be properly completed and that all defects in the work will be made good.
- Provision of an incentive for the contractor to proceed diligently and complete the works promptly.
- Provision of protection to the client against the effect of the contractor defaulting.
- Serving as a source where the client can deduct monies for recovery of liquidated and ascertained damages and cost of employing others to carry out variations or to correct defective work.
- Acting as a cushion and defraying some additional costs when the contractor fails to complete in the case of determination or liquidation.
- Enabling a client to pay the nominated sub contractor and suppliers directly should the contractor fail to pay them.

The retention percentage is normally 5 to 10 %. However, to provide the client with additional security, this figure can be as high as 10% but the effect of a higher retention percentage affects the contractor's cash flow and increases tender figures as its cost form a part of all tender figures.

Generally, the retention is trust money for contractors, and to safe guard their interest contractors have the right to ask the client to place the retention monies in a separate bank account. The retention money so placed protects contractors from financial loss should the client go in to liquidation.

2.85 Liquidated damages

A clause is usually inserted in a contract to make the contractor liable for payment of an amount should he govern the completion date on the contract, it aims at determining in advance the extent of future liability for a specified breach and motivating the contractor to work diligently to meet the projects programme. It must also be remembered that liquidated damages are not a penalty but rather it is a genuine pre-estimate for damages, which may be suffered from breach of contract. If the sum stated as liquidated damages in the contract is too high, it may be construed by the courts as a penalty and unenforceable. On the other hand the amount of liquidated damages may be agreed in advance with a contractor as representing the loss the client is likely to suffer in case of breach in order to avoid the possibility of the amount being construed as a penalty. When contractors become liable to pay the amount of liquidated damages provided in the contract, the sum is deducted from monies due to him as they arise under interim variations. Nevertheless, any such deductions are at the discretion of the client, who decides when and how to receive the money. If the client so wishes, he may waive any right to damages become payable, it will be prudent on the part of the quantity surveyor to inform the architect of the need to deduct monies due to the contractor from interim valuations. On receipt of this information, the architect will be in a position to advise the client accordingly when the certificate is issued.

A contractor in deciding the cash flow forecast must consider the following budgets; labour, plant and preliminaries budgets this should be based on analysis of the contractor's net estimate.

Liquidity problems for contractors

Construction difficulties are because of risk allocation in the contract. Changes in interest rate also have an impact since these affect the cost of short-term finance. Contractors' cash flow is normally illustrated as an S-shaped curve indicating that payments are continuously made for labour, materials, subcontractor's e.t.c. starting up slowly and then building up before tailing. By contrast, cash inflows are received monthly when the client makes a payment on account. This continues until practical completion, with the final payment being made at the end of the defects liability period, therefore, the curve is shown

as stepped.

The following is an illustration of S-shaped curve of contractor's cash flow.

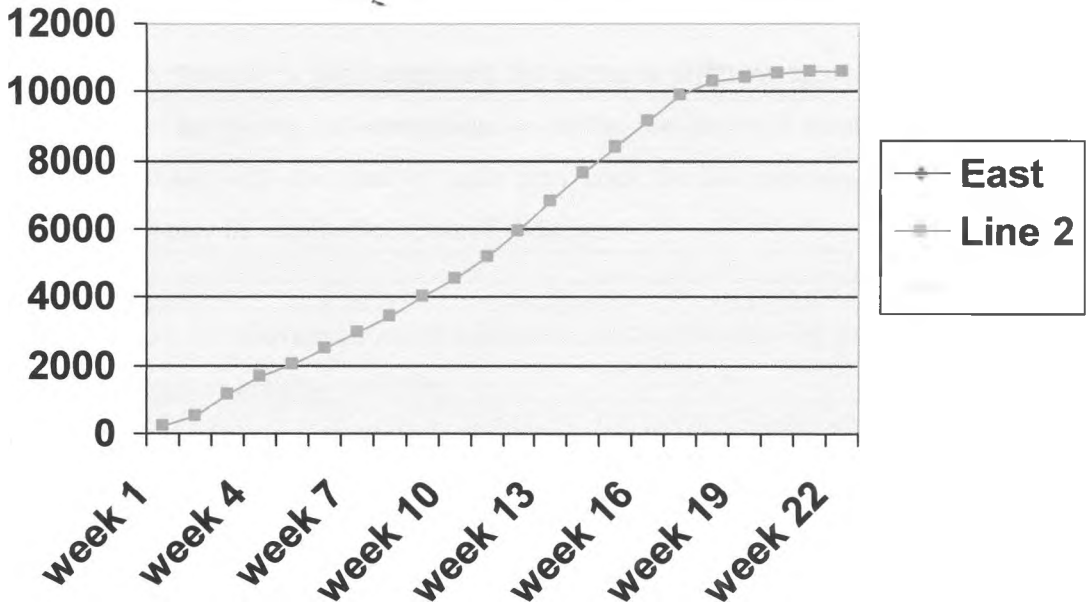


Chart 2.1 An illustration of a contractor's cash flow

It is quite likely that the contractor will have to meet at least some short term financing, if only because of lengthy procedures involved between performing work and receiving payment for it. The chain of events for contractors work is as follows:

Contractor undertakes a portion of works,

He then values all work done on regular basis,

The client's quantity surveyor approves the valuation,

The architect receives approved valuation.

The architect then issues interim certificate and sends it to client who pays the contractor.

Dealing with liquidity problems

For any firm the conventional ways of dealing with liquidity problems are by acquiring sources of short-term finance, such as bank overdrafts and trade credit in the construction process the existence of payment chains allows for the use of trade credit. However it can be argued that some parties exploit their position unfairly, in particular, contractors may be tempted to pass on their liquidity problems to

subcontractors, by delaying payments as long as possible, and by insisting on 'pay when paid' clauses. Although this may improve, cash flow such an approach creates conflict.

However, there is a good argument for taking a different approach, by gaining a reputation for paying sub-contractors promptly; the best will want to work for you, prices quoted will not need to make provisions for late payments and preferential treatment may be received in terms of shortages.

Apart from the above mentioned, additional solutions to liquidity problems for clients and contractors are also available.

Solutions for clients

Besides solutions such as bank and trade credit, client of different types may use the following.

Where a client has several projects running concurrently, then cross subsidization may be possible. Projects with positive cash flows may be used to offset those with negative cash flows.

House builders may sell off-plan, where the buyer pays a deposit at an early stage in exchange for a guaranteed price,

Commercial developers may seek to find a tenant at an early stage of the project – 'pre-let'. This makes the ultimate success of the project more likely thus improving the chances of acquiring, at an earlier stage.

Although selling assets in order to provide cash flow is not normally to be recommended a change in market conditions may mean that surplus amounts of land are being held. These could be sold to release locked up capital.

Solutions to contractors

Bank and trade credit solutions are also commonplace, and like clients, contractors may be able to cross-subsidize projects in certain circumstances. As far as the individual project is concerned, much emphasis has been placed on the importance of contractors recording all the work they do on site. This information should then be promptly reported to the contractor's office, so that it can be established whether it is

additional work with financial implication. This is important for profit as well as cash flow. Among the procedures, which contractors can adopt to improve, cash flows are;

It should be ensured that the interim certificate includes all works carried out to date. This means providing all the necessary information to the client team so that agreement can be reached on the value of variation and claims for and or expenses.

The time gap certification and payment should be monitored. If this appears unreasonably long, then the reasons must be ascertained, it may be due to excessively slow procedures or worse, it may be an indication that the client has financial difficulties. In the worst case, work may be carried out for which payment is never received, because the client goes in to liquidation.

Many of the liquidity problems, which can occur in a construction project, have been considered from the viewpoint of the individual parties. However, it can be argued that those problems could be drastically reduced if the parties were more cooperative and less conflictual.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 AREA OF STUDY

The study covers ongoing construction projects within Nairobi. These areas include; the CBD, Upper Hill Area and construction sites around The University of Nairobi main campus. The area was characterized by Proposed Erection and completion projects and Alteration and extension works projects.

To identify the number of on-going projects in the mentioned areas, the researcher inquired about the approved projects within these areas from the Nairobi City Council department of Planning and Architecture, section dealing with development control. When a project is approved its details are recorded in the agenda items for reference. After consultation with the head of department (registered planner), the researcher made an assumption and decided to use projects that had been approved for a period starting from July 2007 to those approved in May 2008 as the on-going projects within his case study. The total number of projects within this span of time was noted to be 114 projects comprising of Proposed Erection and completion projects, and Alteration and Extension works projects. Out of 114 projects, which in this case make the study population, 32 projects were in Upper hill area whereas 82 projects were within the CBD.

3.1 Sampling Method

To obtain accurate information every member of the accessible population would have been examined. However, this was not possible considering the restrictions of time and resources available for the research study. A sample had therefore to be obtained and taken as a population representative of the target population.

The researcher utilized the accidental/convenient sampling method in which the researcher administered questionnaires to accessible and willing members of the population.

3.2 Data collection

A fieldwork survey was carried out using questionnaires that comprised of multiple choices whereby the respondent was to choose appropriate answers; other questions were left open for the respondent to give his or her opinion. Questionnaires were issued to accessible construction projects. The contractor and the respective developer to various projects were expected to give their response.

The procedure for data collection involved hand delivering the questionnaires to respective respondents or the site agent on site, and a period of one week was given for them to respond to the questionnaires.

3.3 Data

This concern the response obtained from the questionnaires. Qualitative data has been subjected to a likert scale, whereas the quantitative data was analysed using descriptive statistics. Mean and percentages have been used to show what proportion of sample relates to each of the variables considered in the study. Use of narratives has been used in complementing data presented in tables and charts.

3.4 Independent Variables

An independent variable is defined as a variable whose available categories are designated in advance by the researcher. Normally these variables are selected because they are seen to be causative or very important to the particular logical purpose of the research project.

In this study, the nature and characteristic of construction projects were viewed as independent variables, such included;

- Project type and purpose
- Type of developer
- Method of procurement
- Source of finance

3.5 Dependent Variables

As the name suggests, the results of these variables depend upon the independent variables. An example of a dependent variable under this study is; project performance: it depends upon factors such as;

- The effect of initial mobilization costs on project performance.
- The effect of building operations costs on project performance
- The effect of procurement rules on project performance
- The type of developer
- The type of project
- The purpose of the project

3.6 Data Analysis

The data under this study has been analysed and presented in Tables, Bar graphs/charts, and figures. Since this was a qualitative study, descriptive statistics has been used to make inferences.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.0 Introduction

The purpose of this research was to establish the stage of existence at which building contractors experience severe financial constraints. Along side with this purpose were two other objectives which were;

1. Identifying the financial constraints that are unique at the initial stage
2. Establishing the effect of financial constraints in contract performance

The data collected was first analysed by overall description of the projects investigated in regard to; project type and purpose, type of developer and method of procurement, type of construction firm and category of registration, source of finance and lastly, project performance. Further descriptive analysis was done on the variables of study.

The data was collected by administering two questionnaires, one to the contractor and the other one to the respective developer of the identified project. The analysis by two groups was done because of the different perspective that each group has concerning the causes of financial constraints among building contractors at different stages of existence.

4.1 Projects investigated

The total number of projects targeted were all those present in the researcher's case study. The researcher identified those projects after visiting the Nairobi city council where he was informed of the approved drawings for construction i.e. Proposed Erection and completion projects and Projects for works of Alterations and Extensions within his case study. The total number of drawings for projects that had been approved as from July 2007 to the time when the research was being conducted (May 2008) were 114 projects. The researcher grouped these projects according to the type of works done and the respective purpose of the development.

Out of the 114 projects, 83 projects i.e. (73%) of them comprised works of alterations and extensions whereas 31 projects i.e. (27%) comprised proposed erection and completion projects.

The table below illustrates the classification.

Table 4.0: Distribution of projects by type and purpose

(Purpose of project)

Project type	Commercial	Social	Residential	Institutional	Industrial	Totals
Alteration and extension works projects	29	9	17	23	5	83
Erection and completion projects	7	4	11	9	0	31
Totals	36	13	28	32	5	114

Table 4.0 (Source: field study May 2008)

The researcher visited on-going construction projects leaving behind two questionnaires i.e. one for the developer and another one for the contractor. In most cases neither the contractor nor the developer was present on site. The researcher left the questionnaires with the site agent and instructed him on how to distribute them. A period of one week was given for the respondents to fill the questionnaire.

The researcher visited 72 on-going construction sites out of the identified population of 114 projects. This implied a percentage of 63% of the identified study population.

After a period of one week, the researcher visited the sites again collecting the filled questionnaires. He managed to collect 132 questionnaires; (i.e. 66 of them filled by contractors and the other 66 filled by the respective developers of the identified projects). The percentage of the completed questionnaires was therefore 91.6% of the distributed questionnaires.

4.2 Project type and purpose

The researcher categorized the sampled population with regard to type of project and the purpose for which the project was meant for. The researcher did not identify public and private company developers in his research.

The table below illustrates the classification.

Table 4.1 Distribution of projects by type of client and purpose of development

(Purpose of project)

Type of developer	Commercial	Social	Residential	Institutional	Industrial	Totals	Percentage
Government	3	2		7	3	15	22.7%
Government corporation	2	0	5	13	0	20	30.3%
Public company							
Private company							
Individual developer	23		8			31	47%
Totals	28	2	13	20	3	66	
Percentage of sample	77.77%	15.38%	46.3%	62.5%	60%	57.89%	55.16%

Table 4.1 (Source: field study May 2008)

From the table above, the following can be concluded;

- Government owned projects' comprised 22.7% of the sampled population
- Government corporation projects' comprised 30.3% of the sampled population
- Individual developer projects' comprised 47% of the sampled population

The purposes for the various developments were awarded the following percentages with regard to the sampled population;

- i. Commercial purpose – 77.77%
- ii. Institutional purpose – 62.5%
- iii. Industrial purpose – 60%
- iv. Residential purpose – 46.43%

- v. Social purpose – 15.58%

4.3 Type of developer and method of procurement

This was analysed in relation to how various developers prefer different methods of tendering.

Table 4.2: Type of developers and their preferred method of procurement

Method of tendering	(Type of developer)						Total	Percentage
	Government	Government corporation	Public company	Private company	Individual developer			
Competitive tendering	4	6			9	29	29%	
Selective tendering	10	13			20	43	64%	
Negotiated tendering	1	1			2	4	7%	

Table 4.2 (Source: field study, May 2008)

From the table above the following can be seen;

- The most preferable method of contractor selection is selective tendering with a percentage of 64%
- The second preferable method is competitive tendering with a percentage of 29%
- The third and least preferable method of contractor selection, i.e. from the researchers area of study, is Negotiated tendering with a percentage of 7%

The researcher further analysed the chances of developers awarding contracts to beginning contractors. The table below illustrates the findings

Table 4.3 Scoring of developers on awarding of tenders to Beginning contractors

Probability of awarding a contract to a beginning contractor	Voting by developers
High	0

Probability of awarding a contract to a beginning contractor	Voting by developers
Low	66

Table 4.3 (Source: field study, May 2008)

The above table illustrates that the probability for awarding contracts to beginning contractors was low. Developers highlighted the following factors that they consider in awarding a project to a beginning contractor;

- i. The qualifications of the management personnel of the firm. They should possess construction skills.
- ii. The firm's plant and equipment
- iii. The firm's office and service facilities
- iv. The firm's ability in terms of financial status
- v. Integrity of the owners or directors of the firm

The researcher also investigated the mode of payments that developers use when making payments to contractors. An analysis of the intervals was done and also the duration it takes to process payments.

Table 4.4 Intervals at which payments are made to contractors

Intervals at which payments are made	Number of construction firms
Weekly basis	14
Monthly basis	31
Elemental stage performance	3
Progressive performance	15
At the end of the project	3

Table 4.4 (Source: field study, May 2008)

Table 4.5 Periods taken to process payments

Duration it takes to process payments	Number of construction firms
1 week	14
2weeks	3
3 weeks	18

Duration it takes to process payments	Number of construction firms
4 weeks	31

Table 4.5 (Source: field study, May 2008)

4.4 Retention conditions

An analysis was done concerning the percentage rate of deduction made on interim certificate. Most developers do not think retention conditions cause financial constraints to contractors simply because this is made known to them before tendering for a project. The table below illustrates the findings;

Table 4.6 Percentage deductions of retention monies

Percentage rate of deduction	Number of construction firms
1%	-
2%	4
3%	3
4%	1
5%	38
6%	-
7%	2
8%	3
9%	1
10%	14

Table 4.6 (Source: field study, May 2008)

Type of construction firm and registration categories

This was to identify various contractors and categories under which they are registered.

The tables below illustrate the findings on the contractors investigated;

Table 4.7 Construction firms by type of business entity

Type of construction firm/organization	Number of firms
Limited company	23
Partnership	11

Type of construction firm/organization	Number of firms
Sole proprietorship	32

Table 4.7 (Source: field study, May 2008)

The table below illustrates the changes in contractor's category for the period under study.

Table 4.8 Firm upward mobility in registration category

Change of category	B – A	C – B	D - C	E - C	E – D	F- D
Number of firms	9	10	4	4	3	1

Table 4.8 (Source: field study, May 2008)

The following table illustrates current registration categories of the firms interviewed

Table 4.9 Firms by registration category

Current Registration category of the firm	A	B	C	D	E	F	G	H
Number of firms	16	12	17	21				
Percentages of firms interviewed	24.24%	18.18%	25.76%	31.18%				

Table 4.9 (Source: field study, May 2008)

The following table illustrates the initial registration categories of the firms under study

Table 4.10 Firms by initial category of registration

Initial registration category of the firm	A	B	C	D	E	F	G	H
Number of firms	7	11	19	16	10	3		
Percentage of firms interviewed	10.61%	16.67%	28.79%	24.24%	15.15%	4.55%		

Table 4.10 (Source: field study, May 2008)

4.5 Professionals in construction firms

The table below highlights various professionals in the construction firms under study

Table 4.11 Use of professionals by construction firms

Type of professional	Number of construction firm
Architect	10
Quantity surveyor	34
Building surveyor	66
Estimator	53
Structural/Civil engineer	66

Table 4.11 (Source: field study, May 2008)

4.6 Projects undertaken by the firms under study

The table below illustrates the number of projects executed by the contractors under investigation. The study also established that out of the projects investigated, there were some contractors that had not completed some of their projects.

Table 4.12 Allocation of projects done to the number of firms under study together with the number failed projects

Number of projects done	Number of construction firms	Failed projects
1 – 10	21	27
11 – 20	17	43
21 – 50	12	11
50 and above	16	7

Table 4.12 (Source: field study, May 2008)

Failed projects are those that are identified as never completed by the respondents.

The reasons for the uncompleted projects were as a result of;

- i. Failure of client to pay for the works
- ii. Eviction of contractor from site because of poor performance
- iii. Termination of a contract by the client as a result of disputes over contract performance
- iv. The contract being stopped and postponed indefinitely by local authorities

4.7 Source of finance

The researcher analysed the difficulty experienced in sourcing finance at different levels of growth for building contractors. The likert scale has been developed to rank reliability of the different sources of finance. Reliability increases with numerical values which in turn correspondence with the number of firms represented on scale i.e.

<u>Scale</u>	<u>Range</u>
1 – Low	0 – 15 firms
2 – High	16 – 32 firms
3 - Higher	33 – 49 firms
4 – Highest	50 – 66 firms

The table below illustrates the findings

Table 4.13 Reliability of various sources of finance by different firms**(Progressive performance of construction firms)**

Source of finance	1st five years	2nd five years	3rd five years	4th five years
Bank loan	43 firms =3	47 firms =3	33 firms =3	29 firms =2
Grant from a friend	51 firms = 4	11 firms = 1	9 firms = 1	9 firms = 1
Credit from material suppliers	3 firms = 1	29 firms = 2	37 firms = 3	51 firms = 4
Profit generated from previous business	21 firms = 2	37 firms = 3	51 firms = 4	51 firms = 4

Table 4.13 (Source: field study, May 2008)

Chart 4.13 Reliability of various sources of finance by different firms

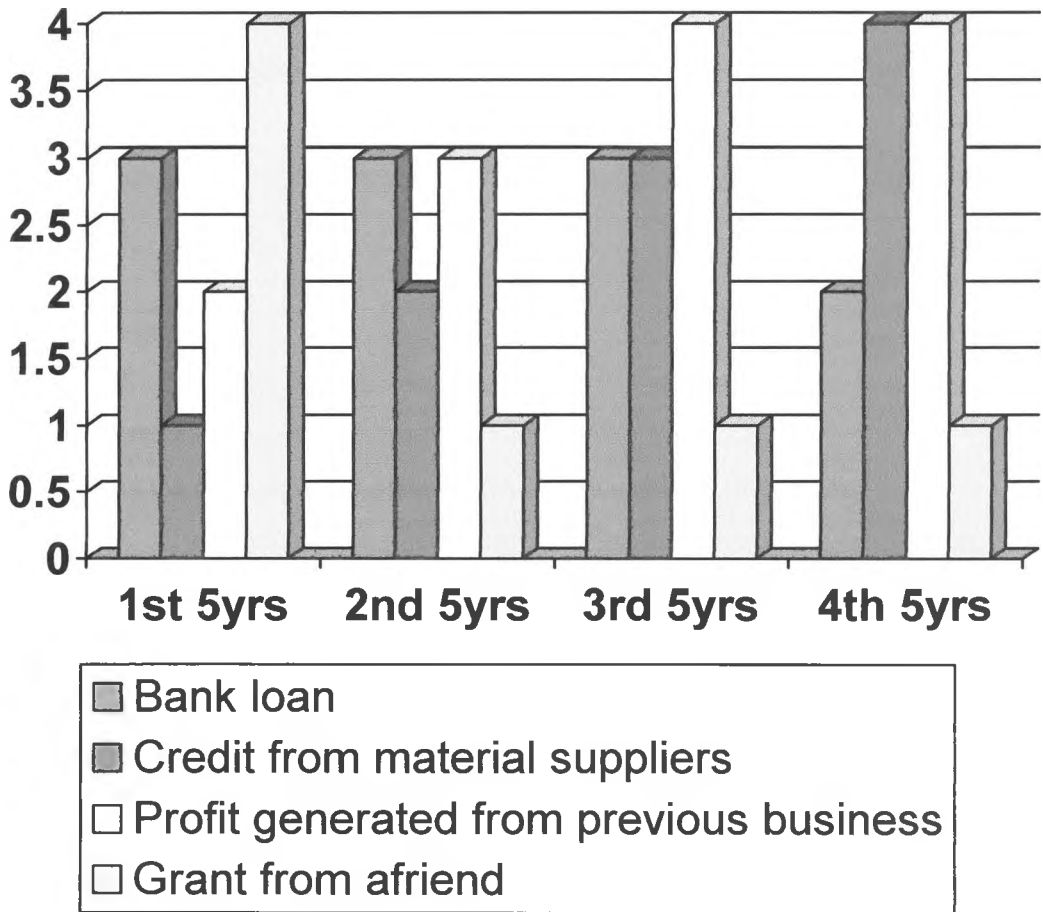


Chart 4.1 (Source: field study, May 2008)

The chart representation above illustrates the reliability of different sources of finance for contractors at different levels of growth. The following can be deduced from the chart.

For the first five years, sources of finance can be ranked as follows;

- i. Grant from friends – highest reliable source of finance; 51 out of 66 firms.
- ii. Bank loans – higher reliable source of finance; 43 out 66 firms.
- iii. Profit generated from previous business – high reliable source of finance; 21 out of 66 firms.
- iv. Credit from material suppliers – low reliability as a source of finance; 3 out of 66 firms.

Second five years;

- i. Bank loan – higher reliable source of finance; 47 out of 66 firms.
- ii. Profit generated from previous business – higher reliable source of finance; 37 out of 66 firms.
- iii. Credit from material suppliers – high reliable source of finance; 29 out of 66 firms.
- iv. Grant from friends – low reliability as a source of finance; 11 out of 66 firms.

Third five years;

- i. Profit generated from previous business – highest reliable source of finance; 51 out of 66 firms.
- ii. Bank loan – higher reliable source of finance; 33 out of 66 firms.
- iii. Credit from material suppliers – higher reliable source of finance; 37 out of 66 firms.
- iv. Grant from a friend – low reliability as a source of finance; 9 out of 66 firms.

Fourth five years

- i. Profit generated from previous business – highest reliable source of finance; 51 out of 66 firms.
- ii. Credit from material suppliers – highest reliable source of finance; 51 out of 66 firms.
- iii. Bank loan – high reliable source of finance; 29 out of 66 firms.
- iv. Grant from a friend – low reliability as a source of finance; 9 out of 66 firms

4.8 Factors affecting progressive performance

The researcher has developed a likert scale to illustrate how various factors affect project performance. (Performance improves with numerical values)

Scale

Assume:

- 1 To represent Poor performance
- 2 To represent Fair performance
- 3 To represent Satisfactory performance

4 To represent Good performance

Various factors affecting performance of construction projects have been arranged in a longitudinal order. The study has analysed a period of twenty years in four quarters each comprising of five years. Contractors responded to the differentiated part of the questionnaire illustrating how the various factors affect them in contract performance at different periods. The researcher analysed these data by awarding grades to performance at the different stages of existence that were under consideration.

The table in the following page illustrates the effect of factors. Grading has been done in awarding varying percentages.

Table 4.14 Factors affecting progressive performance for the period under study (Periods under study)

Factors affecting progressive performance	1st 5yrs 66 respondents	2nd 5yrs 51 respondents	3rd 5yrs 33 respondents	4th 5yrs 11 respondents
Effect of initial site mobilization cost	66 recorded 1	37 recorded 2 14 recorded 1 Average 1.7	27 recorded 3 3 recorded 2 3 recorded 1 Average 2.7	11 recorded 4
Effect of building operations cost	57 recorded 1 7 recorded 2 2 recorded 3 Average 1.17	48 recorded 2 3 recorded 3 Average 2.05	31 recorded 3 2 recorded 4 Average 3.1	11 recorded 4
Effect of unsettled payment by clients	54 recorded 1 10 recorded 2 2 recorded 3 Average 1.21	46 recorded 2 5 recorded 3 Average 2.09	31 recorded 3 2 recorded 4 Average 3.06	11 recorded 4
Delays in payment of certificates	52 recorded 1 12 recorded 2 2 recorded 3 Average 1.2	45 recorded 2 6 recorded 3 Average 2.12	29 recorded 3 4 recorded 4 Average 3.12	11 recorded 4

Factors affecting progressive performance	1st 5yrs 66 respondents	2nd 5yrs 51 respondents	3rd 5yrs 33 respondents	4th 5yrs 11 respondents
Effect of credit arrangements with suppliers and subcontractors	59 recorded 1 5 recorded 2 2 recorded 3 Average 1.26	43 recorded 2 8 recorded 3 Average 2.15	30 recorded 3 3 recorded 4 Average 3.10	11 recorded 4
Effect of plant hire costs	51 recorded 1 13 recorded 2 2 recorded 3 Average 1.26	40 recorded 2 11 recorded 3 Average 2.22	28 recorded 3 5 recorded 4 Average 3.15	11 recorded 4
Effect of retention conditions	57 recorded 1 7 recorded 2 2 recorded 3 Average 1.17	41 recorded 2 10 recorded 3 Average 2.2	31 recorded 3 2 recorded 4 Average 3.06	11 recorded 4

Table 4.14 (Source: field study, May 2008)

The following is a chart representation of progressive performance for building contractors for the period under study:

Chart 4.14 Factors affecting progressive performance for the period under study

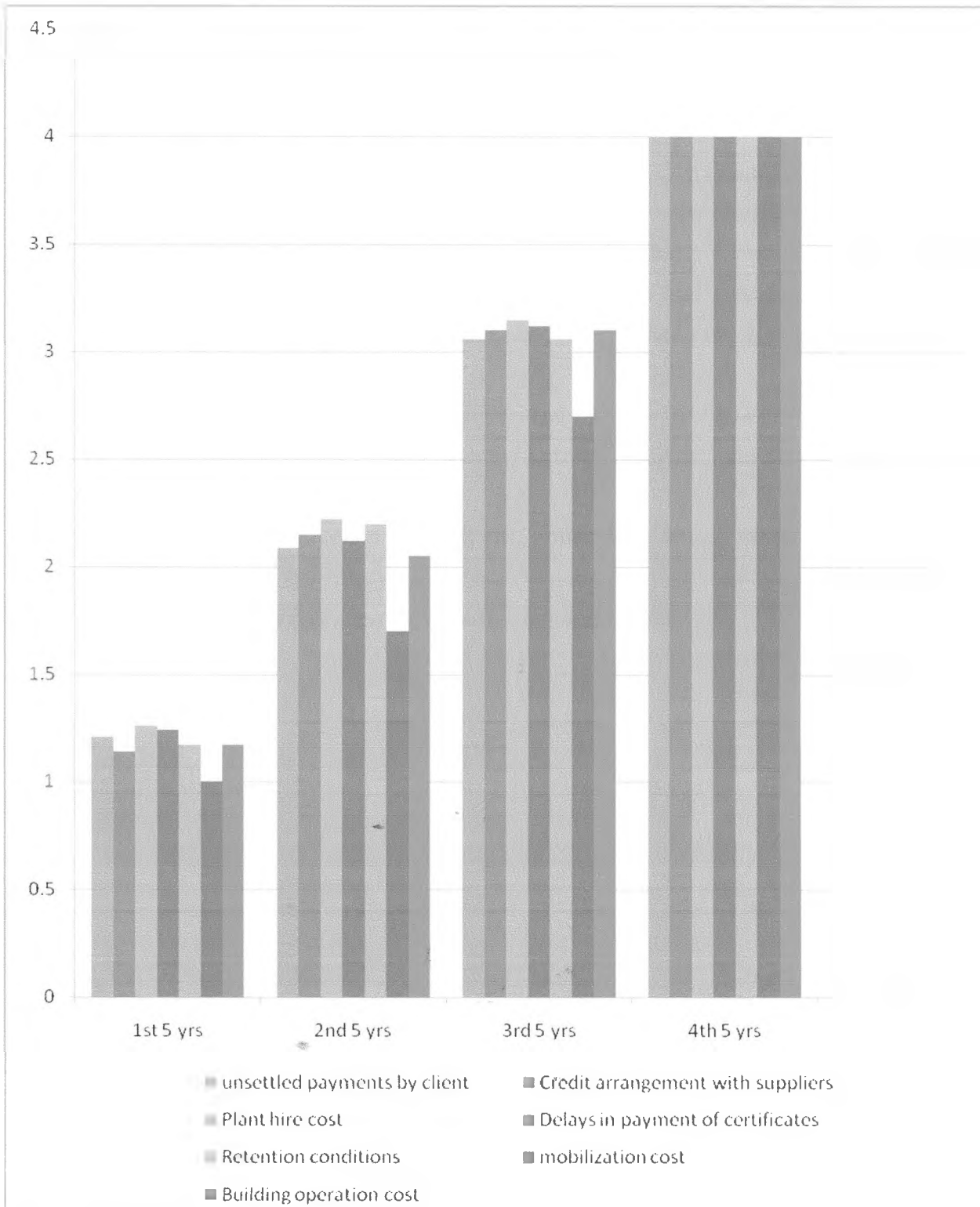


Chart 4.2 (Source: field study, May 2008)

4.9 Problems encountered in the field

In conducting the fieldwork, the following problems were encountered:

1. The research topic dealt with matters pertaining finance and thus, most respondents were not willing to respond to the questionnaire for confidential reasons.
2. It was difficult to identify the exact number of the study population. The city planning and architecture department under the Nairobi City Council does not have a record of on-going projects in the city. Therefore, the researcher relied upon the assumption that; on-going projects were those that had been approved between July 2007 and May 2008. This data was obtained from Agenda items of development control, department of Planning and Architecture, Nairobi City Council.
3. There was a problem of lack of commitment and sincerity among respondents to answer the questionnaires. In most cases the contractor delegated this duty to one of his employees.
4. Access to some construction sites was also denied. This limited the sample of study.
5. Time and resources for carrying out the research was limited.

CHAPTER FIVE

5.0 CONCLUSION OF MAIN FINDINGS AND RECOMMENDATIONS

5.1 CONCLUSION OF MAIN FINDINGS

This project is set out to establish the stages of existence at which building contractors experience severe financial constraints. The other objectives were; to identify financial constraints that are unique at various stages of a contractor's existence and to establish the effects of financial constraints in contract performance.

The researcher carried out the study in a manner that enabled him to identify the various stages of existence for building contractors. Questionnaires were designed in a longitudinal pattern for a period of twenty years in four quarters of five years each.

An analysis of the sources of finance and the various factors affecting contractors' performance was done. And ultimately, the findings were illustrated on bar charts for both analyses i.e. **Chart 4.1 and chart 4.2.**

This chapter summarises the main findings of the study which in turn fulfills the study objectives.

The analyses of factors affecting contractor's performance at various stages of existence has been illustrated on **chart 4.2:**

Within the first five years of study. The highlighted factors were awarded a grade of one (1) indicating that those factors contribute to poor contract performance. This trend of performance increases with increase in the number of years under study, indicating 2, 3 and 4 to represent fair, satisfactory and good performance respectively.

Poor performance at the initial stage is as a result of the different reasons that prospective builders have before they start construction business. Those intending to be builders should know that construction business may take different directions:

There is the possibility of failure of a contractor often because of poor management, there is the possibility of muddling along construction business – this happens to

contractors who bulldoze other business activities alongside with construction works. Such like contractors do not derive any benefits from construction business. The third possible direction is of unplanned expansion for contractors who take advantage of luck or an expanding national economy; such like contractors fail in the event where there is a recess in the economy. The last possible and best direction is that one of planned growth. This is characterized by competent contractors who set up goals and objectives for their firms.

A conclusion can therefore be drawn that financial constraints amongst building contractors are severe at the beginning stage and a notable improvement is noted as time of existence moves forward depending on the direction that a company takes.

The following are financial constraints that severely affect contractors at their initial stages of existence:

- 1) Failure to complete a project: The researcher established reasons for this to be;
 - Failure of clients to pay for works.
 - Eviction of contractors from site because of poor performance.
 - Termination of contracts by client as a result of dispute over contract performance.
- 2) Most of the beginning contractors rely extensively on bank loans as the initial source of capital for building projects. These funds cater for initial site mobilization cost and the high costs of hiring plant and machinery among other expenses.

The disadvantage of this source of finance is that; bank loans are repaid with high interest rate charges which have a negative effect on a contractor's cash flow.

- 3) The researcher also established that there are various other factors that affect contractor's performance at different stages of existence, but the greatest effect is experienced within the initial stages. They include;
 - Unsettled payment by clients
 - Delays in payment of valuation certificates by developers
 - Retention conditions in valuation certificates

5.2 Recommendations

- 1) The researcher established that contractors experience difficulties in financing projects at their initial stage of existence. The researcher therefore recommended that prospective contractors should have adequate seed capital before they start construction business. This will enable them finance construction works easily at their initial stage of existence and also enable them to have a good plan for growth which in-turn make them to be competent contractors.
- 2) The researcher also established that developers have a low tendency in awarding projects to beginning contractors. Thus, if clients were encouraged to consider the technical competence of a firm's personnel rather than experience of the firm, the effect of segregation would be minimized.

5.3 Areas of further study

Having established the financial constraints at various stages of contractor's existence, the researcher established that contractors had difficulties in sourcing funds for projects at the initial stages of their existence. The researcher therefore recommends that further research be done on the effect of financial constraints to beginning contractors.

BIBLIOGRAPHY

1. A.A. Kwakye, *Construction project administration in practice*
2. Abdelhalim Boussabine & Richard Kirkham, 2004, *Whole life cycle costing Risk and Responses*. Blackwell publishers
3. Brian Cooke & Peter Williams, *Construction planning, programming and control*.
4. Coombs W.E. (1977), *Cost Accounting and Financial; Management*, wiley Interscience Publications
5. Derek Miles, *Financial problems for the small building contractor*
6. IQSK annual journals
7. Ngaamba K.M (1999) *Investigation into the viability of commercial paper as an alternative method of financing contractors* (unpublished undergraduate thesis)
8. Stephen Lavender, 2001, *Management for the construction Industry*. Longman Publishers.
9. Suleiman Ondieki Magare (1989) *Indigenous construction business financing* (unpublished master's thesis)
10. Wahome .G.W. (1986) *Financing the building process: financial constraints and the African Contractor* (unpublished undergraduate thesis)
11. Wikipedia 2007: www.wikipedia.com

APPENDIX A
UNIVERSITY OF NAIROBI
SCHOOL OF BUILT ENVIRONMENT
DEPARTMENT OF REAL ESTATE AND CONSTRUCTION
MANAGEMENT

QUESTINNAIRES ADMINSTERED TO CONTRACTORS

AN INVESTIGATION INTO THE CHALLENGES FACING CONTRACTORS AT VARIOUS STAGES OF THEIR EXISTENCE IN FINANCING PROJECTS.

Confidential clause; I am a fourth year Building Economics student in the University of Nairobi carrying out a research on the challenges facing building contractors in financing contracts. The information given in this questionnaire shall be treated as confidential and shall be used for no other purpose, but this study.

Date of interview: _____

Questionnaire No. _____

Project name:
.....
.....
.....

Location:.....
.....
.....
.....

Name of contractor:

.....
.....
.....

1) Type of organization? *(Tick where appropriate)*

Limited company ()

Partnership ()

Sole proprietorship ()

Any **other** **specify**

.....
.....
.....

2) Post/Position of interviewee in the organization?

.....
.....
.....

3) When was your organization incorporated as a construction firm?

.....
.....
.....

4) Under what category?

A () B () C () D () E () F () G () H ()

5) Under what category is your organization registered to-date?

A () B () C () D () E () F () G () H ()

6) Did the founders of the organization have construction skills?

() Yes

() No

7) Tick against the name of professionals that your company has indicating the numbers?

() Architect (s) _____

() Quantity surveyor (s) _____

() Building surveyor (s) _____

() Estimator (s) _____

() Structural/civil engineer (s) _____

8) Why was the construction firm started?

.....
.....
.....

9) What is the number of projects that have been handled by your organization?

() **1 – 10**

() **11 – 20**

() **21 – 50**

() **50 and above**

10) Out off the projects held are there some that were never completed?

() **Yes**

() **No**

11) If yes, how many are they?

.....
.....
.....

12) What was the reason for uncompleted projects?

.....
.....
.....
.....

Please give answers to the following as differentiated in the questionnaire to enable the researcher identify the stage at which financial constraints are extreme.

14) What was your source of funds for financing projects? (*Tick appropriate brackets*)

	1 st	2 nd	3 rd	4 th
	5 yrs	5 yrs	5 yrs	5 yrs
Bank loan or overdraft	()	()	()	()
Credit from material suppliers	()	()	()	()
Profit generated from previous business	()	()	()	()
Grant from a friend	()	()	()	()

Any other, specify for;

1st five years

.....
.....
.....
.....

2nd five years

.....
.....
.....
.....

3rd five years

.....
.....
.....
.....

4th five years

.....
.....
.....
.....

15) At what stage of performance do you find financing troublesome?

	1 st	2 nd	3 rd	4 th
	5 yrs	5 yrs	5 yrs	5 yrs
Initial site mobilization	()	()	()	()
Building operation costs	()	()	()	()

16) Does your organization experience cases of unsettled debts to suppliers or employees after project performance?

	1 st 5 yrs	2 nd 5 yrs	3 rd 5 yrs	4 th 5 yrs
Yes	()	()	()	()
No	()	()	()	()

17) If yes, what is the likely reason?

	1 st 5 yrs	2 nd 5 yrs	3 rd 5 yrs	4 th 5 yrs
Client failing to settle some of your Outstanding debts	()	()	()	()
Contractor diverting project funds to Other business	()	()	()	()
Loss from project performance	()	()	()	()

Any other, specify for;

1st five years

.....

.....

.....

.....

2nd five years

.....

.....

.....

.....

3rd five years

.....
.....
.....
.....

4th five years

.....
.....
.....
.....

17) Does your company experience cash flow problems?

- Yes
- No

18) Please rank the following in an order that will show how they contribute to cash flow problems. (Assume 1 to be the most probable cause and 4 to be the least probable cause)

- Retention conditions
- Delay in payments by the client
- Credit arrangement with suppliers and subcontractors
- Plant hires and advance payments

19) At what stage are cash flow problems high?

- Beginning
- Once the firm is established

20) Give a brief, general view of how clients should administer payment certificate?

.....
.....
.....

.....
.....
21) Have you ever been segregated by a client for being inexperienced?

	1 st 5 yrs	2 nd 5 yrs	3 rd 5 yrs	4 th 5 yrs
Yes	()	()	()	()
No	()	()	()	()

22) Are the current procurement rules favourable for beginning contractors?

() **Yes**

() **No**

22) Explain for any of the answers above?

.....
.....
.....
.....
.....

23) Give a brief overview of the financial difficulties you experienced in your initial projects as beginning contractor?

.....
.....
.....
.....
.....

THANK YOU

APPENDIX B
UNIVERSITY OF NAIROBI
SCHOOL OF BUILT ENVIRONMENT
DEPARTMENT OF REAL ESTATE AND CONSTRUCTION
MANAGEMENT

QUESTINNAIRES ADMINSTERED TO DEVELOPERS

AN INVESTIGATION INTO THE CHALLENGES FACING CONTRACTORS AT VARIOUS STAGES OF THEIR EXISTENCE IN FINANCING PROJECTS.

Confidential clause; I am a fourth year Building Economics student in the University of Nairobi carrying out a research on the challenges facing building contractors in financing contracts. The information given in this questionnaire shall be treated as confidential and shall be used for no other purpose, but this study.

Date of interview: _____

Questionnaire No. _____

Project name:

.....
.....

Location:

.....
.....

Name of Developer:

.....
.....
.....

1) Type of developer? *(Tick appropriate bracket)*

Government

Government corporation

Public company

- Private company**
- Individual developer**

2) What is your source of finance?

- Self finance**
- Bank loan**

Any **other** **specify**

.....
.....

3) Purpose of the on-going development?

- Commercial**
- Residential**
- Social**
- Industrial**

Any other specify

.....
.....
.....

4) How was the contractor procured?

- Competitive tendering**
- Selective tendering**
- Negotiation tendering**

Any other, specify

.....
.....
.....

5) Do you consider experience of a contractor in awarding tenders?

- Yes**
- No**

6) What are the chances for awarding a project to a beginning contractor?

- Low**
- High**

7) What factors do you consider in awarding a project to a beginning contractor?

.....
.....
.....

8) Who advises you on how to pay a contractor?

.....
.....
.....

9) At what intervals do you make payments to contractors?

- () Monthly basis
- () Depending on progressive performance
- Any other, specify

.....
.....

10) How long does it take to process payments?

- 1 week
- 2 weeks
- 3 weeks
- 4 weeks
- Any other duration, specify

.....
.....

11) How do you assist the contractor in financing the project?

.....
.....
.....

12) Do you deduct retention funds on interim certificates?

- () Yes
- () No

13) If yes, what percentage do you deduct?

.....



14) What do you think about these retentions, do they cause cash flow problems to the contractor? (Give an explanation for your answer)

.....
.....
.....

15) Are you satisfied with the contractor's performance? Give an explanation of your answer

.....
.....
.....
.....

16) Give a general view of what you feel about aiding a contractor to finance a project?

.....
.....
.....
.....

THANK YOU