



ADDIS ABABA UNIVERSITY
ADDIS ABABA INSTITUTE OF TECHNOLOGY
SCHOOL OF CIVIL AND ENVIRONMENTAL ENGINEERING

CHALLENGES OF LOWER GRADE CONTRACTORS
IN ADDIS ABABA

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of the requirements for the Degree of Master of Engineering in Civil Engineering
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DECLARATION

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ABBREVIATIONS

BC	-	Building contractors
DPW	-	The Department of Public Works
EEA	-	Ethiopian Economic Association
GC	-	General Contractors
GDP	-	Gross Domestic Product
GDCF	-	Gross Domestic Capital Formation
LFS	-	Labour Force Survey
MoFED	-	Ministry of Finance and Economic Development
MoWUD	-	Ministry of Work and Urban Development
NCCZ	-	The National Construction Council of Zambia
RC	-	Road Contractors
SC	-	Specialized Contractors
SC-LS	-	Specialized Contractors Landscaping
SC-PD	-	Specialized Contractors Painting and Decorations,
SC-SI	-	Specialized Contractors Sanitary Installation
SC-WM	-	Specialized Contractors Wood and Metal Works
SME	-	Small Medium Enterprise
TACECA	-	Tanzania Civil Engineering Contractors Association
UCBP	-	University Capacity Building Program

ABSTRACT

In the construction industry, contractors have many challenges on their progress and performance while on the other hand opportunities that lead them for success as well. The large contractors today could have once been small contractors and vice versa. The challenges faced specifically by lower grade contractors may determine their overall presence, involvement and functionality to a large scale. Since these lower grade contractors need to stay in the industry and actively perform in order to progress and develop, it is vital to identify the triggering and hindering factors and challenges that affect their progress, development and presence as a firm. This research helps to recognize the difficulties, challenges and factors revolving inside and around lower grade contractors. The research will also give good background information and what new small contractors should be aware of the industry's environment before they jump to enter into. The necessary measures and strategies to be taken to enable and capacitate these contractors are also been indicated.

Key words: Lower grade contractors, Challenges of contractors, Construction projects

CHAPTER 1

INTRODUCTION

1.1 Background

Construction industry is an important element for the development of a country. It contributes for job creation and large employment of human resources. Construction industry can be used as a measure of a country's growth since it plays important role in social, economic and Political development of country.

The construction industry is vital for the development of any nation. In many ways, the pace of the economic growth of any nation can be measured by the development of physical infrastructures, such as buildings, roads, rail ways, hydropower stations and bridges. Construction project development involves numerous parties, various processes, different phases and stages of work and a great deal of input from both the public and private sectors, with the major aim being to bring the project to a successful conclusion.

The level of success in carrying out construction project development activities will depend heavily on the quality of the managerial, financial, technical and organizational performance of the respective parties, while taking into consideration the associated risk management, the business environment, and economic and political stability.

As construction is becoming more complex, a more sophisticated approach is necessary to deal with initiating, planning, financing, designing, approving, implementing and completing a project. The common assessment of the success of construction projects is that they are delivered on time, to budget, to technical specification and meet client satisfaction.

However, the criteria for success are in fact much wider, incorporating the performance of the stakeholders, evaluating their contributions and understanding their expectations. A stakeholder is an individual or group, inside or outside the construction project, which has a stake in, or can influence, the construction performance. Construction projects potentially can have different sets of stakeholders as: client, consultant, contractor, supplier, end-user and the community.

Successful construction project performance is achieved, when stakeholders meet their requirements, individually and collectively.

Construction projects involve a great deal of time and capital, so effective construction project management skills are required if the projects are to be completed within the established time line to meet cost limitations and quality requirements.

Nowadays there has been a large scale investment in the Ethiopian construction industry. Ethiopian government and private sectors have been investing widely for the development of infrastructures. This industry has many participants that play a major role in the functioning which contractors take the main part. Among these parties, contractors have a greater role to play in the development and execution of works in the construction industry.

According to the information obtained from the Ministry of Construction of Ethiopia, there are totally 6800 contractors registered for 2009 budget year. These contractors have different grades, capacities, organizational characters, and performances depending on many factors. The capacity, performance and competitiveness of these contractors have a major impact on their overall well-being, development and progress from smaller grades to upper ones. Among these numbers of contractors, 50% of them (i.e. 3396) are from grade 7 up to grade 10.

According to the directives for registration of contractors obtained from Ministry of Urban Development and Construction, GC (General Contractors) are contractors who are qualified to undertake a variety of construction work such as building, roads railways bridges, airports, dams, water works... etc. BC (Building contractors) are contractors who are qualified to undertake building construction and supplementary works to buildings. RC (Road Contractors) are contractors who are qualified to undertake construction of roads and other related Civil Engineering works. If portion of the project work that requires specialization exceeds 15 percent of the total project cost, that part is to be subcontracted out to the appropriate specialized contractor. SC (Specialized Contractors) are contractors who are qualified to undertake construction activities in specialized fields as classified under the sub-categories like Painting and Decorations (SC-PD), Sanitary Installation (SC-SI), Wood and Metal Works (SC-WM) and Landscaping(SC-LS).

In the Ethiopian construction industry, contractors have many challenges on their progress and performance while on the other hand opportunities that lead them for success as well. Such comparatively small contractors stay and function actively while others stay in the industry and do not function actively and are dominated then forced to leave eventually due to different reasons. Since the contribution of each contractor is vital for feeding the constructional industry of a country, contractors need to understand what challenges they are going to face, factors affecting their progress and how to overcome them in order to be successfully integrated. Therefore, this research tries to address the reasons behind these issues and factors that affect the progressive activity of lower grade contractors and challenges to their performance.

1.2 Statement of the problem

Contractors are main participants that have a major role and involvement in the development of construction industry and country's economy as well. Contractors have many challenges on their progress and performance while on the other hand opportunities that lead them for success as well. Among these contractors, lower grade contractors (grade 7 to grade 10) make up to fifty percent of the total number of contractors in Ethiopia. As any contractors that are on the top level, these contractors do face many and more challenges that prohibits their progress and performance. Due to these factors, contractors execute works, perform and behave in way that one is different from the other. Some of them stagger to stay in the industry, some stays dormant for a long period of time while others function actively. The varying progress and status gives a clue that there could be some reasons for them to behave in such ways. Therefore, it is very important to identify and study these reasons, challenges and factors whether they arise from external or internal conditions in order to these lower grade contractors perform and progress steadily. The reason for this research needs to be conducted is to identify the challenges of lower grade contractors and to enable them overcome such problems and make them progress while being active participants of the construction industry. This research will also help to understand what the concerned stakeholders should do to contribute for the progress of these lower grade contractors.

1.3 Objectives of the research

1.3.1 General objective

- To identify the challenges of lower grade contractors and factors that affect the overall functional activity of lower grade contractors in Addis Ababa

1.3.2 Specific objectives

- To investigate the challenges of lower grade contractors
- To identify the reasons why lower grade contractors leave the construction industry
- To recommend what should be done by concerned bodies and stakeholders in order to overcome these challenges, to strengthen and capacitate lower grade contractors.

1.4 Significance of the research

This research will make a finding about the challenges of lower grade contractors. Since there are many of these contractors participating to different degrees in the construction industry, it will give them awareness of challenges that they are going to face and they make ready themselves to overcome such challenges. The research will also give good background information what emerging and newly established small contractors should be aware of the industry's environment before they jump to enter into. The other significance of the research is that the concerning stakeholders and firms will get ideas about the areas that they can capacitate and strengthen these lower grade contractors to make them contribute for the construction industry and function consistently.

1.5 Scope of the research

The scope of this research is limited to lower grade contractors that range from grade 7 up to grade 10 contractors in Addis Ababa. The research totally considers building contractors, road contractors and general contractors which are from grade 7 to grade 10.

1.6 Limitation of the research

This research tries to focus only on the challenges of contractors from the perspective of the contractors themselves. The study is solely based on contractors.

CHAPTER 2

LITERATURE REVIEW

2.1 General overview

2.1.1 The construction industry

The construction industry in Ethiopia has been developing tremendously since 2001. Recent studies by indicated that the GDP contribution of the industry has been raised to 5.6% and approaches to the sub Saharan average (6%). Meanwhile, the Gross Domestic Capital Formation (GDCF), which was about 60 percent in 1996/97, has reached nearly 75% in 2002/03. Beyond its contribution to the nation, the industry is also the 6th major contributor of the content infrastructure stock following South Africa, Egypt, Morocco, Algeria and Nigeria. Since then, the country has been implementing significant number of programs/projects, which include the University Capacity Building Program (UCBP), the housing development program and the road sector programs among others (Ayalew et al., 2016).

In Ethiopia, the activities actually covered under the industry are the construction and maintenance activities of: Residential buildings in urban and rural areas, Nonresidential buildings, i.e. factory buildings, ware houses, office buildings, garages, hotels, schools, hospitals, clinics, etc., Other construction works, like roads, dams, dikes, athletic fields, electricity transmission lines, telephone & telegraph lines, etc. In principle, activities undertaken by the construction industry which do not fall under the industry such as the quarrying of stone, gravel crushing, and manufacturing of bricks, are not part of the industry's production and hence should, if possible, be allocated to separate group of economic activities. As stated by (MoFED, 2005) this, however, would not be possible in most cases and hence such output is also included in the construction sector.

The construction industry consists of various sectors. These are the building and residential development sector, civil engineering sector, professional services sector and self-building sector. The construction industry consists of different types and size of firms. These operate in the different sub-markets characterizing the construction industry. Construction firms must be

registered and licensed in order to undertake any construction work in Ethiopia. The firms are classified according to size, expertise and financial capability by the ministry of work and urban development (MoWUD). The self-building sector is characterized by an informal sector, consisting of informal groups that supply materials and labor. These informal groups are not licensed or registered. However, they employ a great number of people. The professional services sector consists of architects, civil engineers, electrical engineers, sanitary engineers, and mechanical engineers, quantity surveyors and surveyors who provide the design expertise. The services of these consultants are not utilized in the informal and self-build sectors. There exists a great separation between the design consultants and the contractors.

Construction industry is one of the key industries of any country. But, these days, construction projects in general and building construction projects in particular are becoming more and more complex. One of the main challenges in construction industry is the need for integration of construction parties for the construction of buildings as per the project definition and requirement. These integration problems mainly take place at any construction project phase (i.e., initiation, planning, design, construction, or close out), and to eliminate these problems, they must be properly identified. Once the problems are identified, it is easy to prevent their occurrence. For this reason, effective construction management is essential which deals with identifying the factors that cause integration problems (La Hart, 2007).

Generally, the construction industry is labeled as a ‘traditional industry’ which adopts new technologies and practices at a slower rate as compared to other industries such as the IT, manufacturing and automotive. It is an extremely fragmented and sequential project delivery system whereby projects are incepted by clients, designed by consultants and implemented by contractors in a very fragmented manner (Egan, 1998).

In most cases, the place of production of construction has to be necessarily the place where the product is going to be used; and it is changing regularly with workers constantly moving from one site to another, cooperating with different partners in fixed term nature. This determines the structure of the industry including the creation of many small firms, each forming temporary groupings upon project basis for the duration of the project. Moreover, the outputs of

construction are generally large, heavy, durable, expensive, heterogeneous, and immobile; and the characteristics of location of production and location of products, with products immobile, the construction market is mostly restricted to be local.

Unlike most consumer products that are readily produced in bulk, the demand for the product of the construction industry is generally only produced upon the initiation of, and to the requirements of the clients in terms of what product that they want. These construction projects are developed in steps and continue to be elaborated and expanded as the work on the projects progresses in separated processes where various feedback loops reinforce the previous processes and enhance the elaboration processes. Moreover, construction projects are not an end to a goal by themselves; rather, they are a means to a goal which are usually incepted to stratify a certain business need or service (Tadesse, 2016).

2.2 The construction industry in Ethiopia and other developing countries

The construction industry in developing countries has the same institutional requirements to those of developed countries (Larcher, 1998). The primary stakeholders are also the same however; the ‘balance of power’ is significantly different to that in developed countries. The points to note are that firstly in developing countries the client is predominately the government while in developed countries the client can often be from the private sector. The lack of resources and experience of contractors in developing countries places them in a much weaker position than the government and client. Under the traditional contracting system they are therefore forced to accept a proportionally greater contractual risk than they are able to bear when compared with their counterparts in developed countries (Young, 1993). Finally, in developed countries, the majority of contract administration work is undertaken by consulting engineering firms. In developing countries, the consulting profession is almost nonexistent in developing and emerging countries.

(Larcher, 1998) also stated that the support framework in developing countries is also very weak. While organizations may exist in the majority of the categories discussed above there is often only one or two in each category, which have limited resources to provide a high level of support. In developed countries, many of the organizations in the support framework are

financed by the three stakeholders. Within developing countries this financial resource is not available as the engineering profession is virtually nonexistent, contractors have very limited financial resources and the government budgets are unable to meet the requirements of the road construction and maintenance budget, without supporting the industry framework which carries out the work. Training of construction personnel at all levels from engineers and construction managers to artisans and labor is one of the primary functions of the support framework. Studies undertaken by the World Bank (Auerhan, 1985) highlighted that while a lack of funding was a major problem with the poor education system in Sub-Saharan Africa, it was not the only cause. The study highlighted that a lack of resource management and planning within the education system was also a cause. In addition the reputation of management topics within the education system is low, which results in a lack of qualified staff and specialists in these areas. This situation has a number of knock on effects to those receiving training on construction related activities. While they are able to receive education on the ‘hard engineering’ skills there is poor education provided for the ‘soft engineering’ skills of construction and business management. It also stated the lack of physical infrastructure and centralization of education facilities, usually in the capital city results in poor training in the provinces. Finally, the lack of information resources within the education sector contributes to the general lack of information resources within the construction sector.

Within developing countries the tripartite system does not work as the consulting engineering profession is virtually nonexistent. This situation requires a different mode of operation for the industry where the client takes on the main roles of the engineer. This means that the government departments must undertake the design work and then prepare, tender and supervise the contracts for work that they require to be undertaken. Within the existing state owned enterprise system there is in general the capacity within the road authority to undertake the design work. The outputs from the design group were passed to the labor gangs to execute the work and to ensure that it was constructed to agreed standards. This, results in little experience and capability to prepare and administer contract documents, supervise independent contractors and measure and certify work completed for monthly payments. There are therefore two distinct institutional problems, which must be addressed by countries who are attempting to utilize the private sector to undertake road construction and maintenance (Larcher, 1998).

- The lack of a consulting engineering profession
- The poor capacity within the support framework to assist the contracting sector.

In addressing the first item the long term objective may be to develop the engineering profession; however this is likely to take many years or even decades in some cases before the sector has sufficient capacity to undertake the roles which would be demanded from it. As a design capacity exists in the government agencies the most appropriate solution in the short to medium term will be to develop the government agencies capacity to prepare, award and administer contracts. The contracting sector is generally under developed however; this primarily can be attributed to the lack of the support framework for the industry. It will not be possible in the short to medium term to develop an extensive support structure however, a lower level of support, which addresses the core needs, must be provided (Mosisa, 2013).

2.3 The role of the construction industry in an economy

Construction industry makes significant contributions to the socio-economic development process of a country. Its importance emanates largely from the direct and indirect impact it has on all economic activities. It contributes to the national output and stimulates the growth of other sectors through a complex system of linkages. It is noted that about one-tenth of the global economy is dedicated to constructing and operating homes and offices (UNEP, 1996).

UNEP further observes that the industry consumes one-sixth to one half of the world's wood, minerals, water and energy. It contributes to employment and creates income for the population and has multiplier effects on the economy. The construction industry employs large unskilled labor. Throughout the developing world, the majority of employees in the industry are unskilled. Women are also found to be beneficiaries of the employment in the industry. However, the employment in the industry is mainly temporary in nature and once the job is over, the workers are obliged to find other jobs or return to their place of origin. Similar to all other socio-economic activities, another key contribution of the construction industry is revenue generation to government. The construction industry contributes to economic activity through generation of revenue for government from corporate income taxes of companies, the rental income, sales tax, capital gain tax and employees income tax from those employed in the construction industry,

which in turn goes to the financing of public services such as schools and health institutions among others.

In order to identify and estimate the total economic contribution of the construction industry to an economy, one has to look beyond the direct expenditures made by the industry itself, since there is a ripple effect of the expenditures made for goods and services supplied to the industry. Likewise, business revenues generated from supplying of goods and services to the construction industry are paid out in wages, and material costs, which in turn are spent on living costs. This multiplier effect enlarges the economic impact of the initial construction industry expenditures. In other words, the initial wave of spending generates a second and third wave of spending as wages paid and profits made on the direct construction spending spins through the economy in several cycles. According to Ethiopian Economic Association (EEA, 2006), thus, the original direct expenditure yields a greater economic impact than just initially spent.

2.4 The role of the construction industry in the Ethiopian economy

2.4.1 Contribution to national income

The construction industry has important contributions to the Ethiopian economy, as demonstrated by its share in the GDP. For instance, the share of the sector in the total GDP averaged at about 5.2 percent in the period 2002/03- 2006/07. The sector has registered relatively higher growth as compared to the growth of GDP during this period. Over this period, there has been increased investment on the development and expansion of various infrastructure projects like roads, airports and residential and non-residential housing units.

2.4.2 Contribution to employment

The role of the construction industry in terms of creating employment opportunities especially in urban areas is becoming visible. According to the 1999 Labour Force Survey (LFS), of the total employed persons in the country which was estimated at around 25 million, 0.9 percent was estimated to be in the construction industry. The contribution of the industry in terms of creating employment has slightly improved over the years. For instance, according to the 2005 LFS, of the total employed population in the country (31.4 million), 1.4 percent was estimated to be in the construction industry.

2.4.3 Contribution to government revenue

The construction industry also contributes to the generation of revenue for the government. The rental income tax is one of the major revenue sources within the construction industry to the government. The rental income tax which was Birr 15.2 million in 1997/98 has increased to Birr 78.3 million in 2004/05 but lowered to Birr 32 million in 2005/06 generating nearly half a percentage point of the total government revenue in the period 1997/98- 2005/06.

2.5 Construction firms in the construction industry

According to EEA (2012), although substantial progress is made in setting the appropriate private sector strategy in different African countries, it is becoming increasingly difficult to implement as problems associated with contracting procedures and the industry support framework are becoming more apparent to both contracting organizations and road agencies. Recently in Ethiopia, interest grew in stimulating private sector involvement, on the grounds that these small private enterprises/contractors would be able to overcome the inefficiency problems of the large state owned organizations, thus improving the level of wealth distribution, job creation, cost efficiency, competitiveness and unemployment undertaken with the limited financial resources available.

As noted by Wong & Thomas, construction companies are vulnerable to bankruptcy due to the way the industry is fragmented, stiff competition, low entry barriers, high uncertainty, high risks and fluctuations in volumes and numbers of construction projects. Slumps in construction volumes give rise to bankruptcy. Dramatic changes in business environments or economic climates affect the construction industry, which is highly recessionary. The damage resulting from the collapse of construction firms goes beyond obvious costs that can be quantified. Low profit margins, weakness of the construction industry, heavy operating expenses, low capital bases, excessive debt, poor management, no early warning systems, increments in project size, poor payment and billing systems, low profitability, inaccessible areas and poor accounting systems all contribute to the causes of construction business failure (Chadhliwa, 2015).

Organizations have to be successful in their businesses in order to survive in competitive business environments such as construction. The construction industry is changing constantly

with the developments of new business methods and technologies (Koota, 2003). Therefore, construction companies should follow these applications and develop appropriate strategies to be more competitive in this industry and succeed in their businesses. As construction is a risky business, the possibility of business failure always exists for any construction company. Within this context, construction companies have to consider the critical factors to prevent business failure and continue to survive in the industry (Kivrak, 2008).

A construction company's decision to expand into international markets must be based on a good understanding of the opportunities and threats associated with international business, as well as the development of company strengths relative to international activities. The findings of a study that was done by surveying the executives in charge of international construction of large United States based contractors indicate that track record, specialist expertise, project management capability are the most important company strengths; loss of key personnel, shortage of financial resources, and inflation and currency fluctuations are the most important threats relative to international markets; and increased long term profitability, the ability to maintain shareholders' returns, and the globalization and openness of the markets are the most important opportunities available in international works. The vast majority of construction firms are small enterprises that rely on outsourcing personnel as required. This has severely affected skills training and the retention of expertise in the industry as construction workers become highly mobile, walking in and out of the industry, depending on performance in other sectors of the economy. Delays with interim and final payments, as well as onerous contract conditions faced by construction firms, can also impose huge constraints on the industry. Many construction firms have suffered financial ruin and bankruptcy because of delays in payment, which are common with government contracts (Luger, 1997).

Small Medium Enterprise (SME) construction organizations are facing very demanding and competitive environment in the construction industry. The demanding and competitiveness of the construction industry required SMEs to be continuously vigilant to current situation and plan to the future. Many of these organizations failed to respond to ever changes environment and some of them were forced to fold their business (Yahya, 2015).

Besides construction businesses going insolvent and failing, construction contractors often fail to deliver projects on time. Accurate predictions of project completion and meeting completion dates result in clients being satisfied; giving contractors a comparative advantage over others. Both internal (for example the competency of contractor) and external forces (for example the competency of the design team and weather conditions) have an influence on project delivery. The ability to minimize the impact of these forces from inception to completion will determine the successful delivery of projects. Forces such as the inability of the client and design team to have a comprehensive overview of the construction process, lack of project management skills, complexity of the project, uncertainty (for example high water table when excavating for foundations), poor communication, inadequate integration of tasks and inadequate coordination of tasks all result in delays in project delivery (Chadhliwa, 2015).

In the Ethiopian construction industry, contractors have many challenges on their progress and performance while on the other hand opportunities that lead them for success as well. Such comparatively small grade contractors stay and function actively while others stay in the industry and do not function actively and are dominated then forced to leave eventually due to different reasons. Since the contribution of each contractor is vital for feeding the constructional progress of a country, contractors need to understand what challenges they are going to face, factors affecting their progress and how to overcome them in order to be successfully integrated.

In order to achieve the full benefits of using the private sector and Small, Medium and Micro Enterprises, there must firstly be a contracted workload of adequate size. Secondly there must also be sufficient numbers of construction companies to create a demand for work and hence realistic competition with the associated competitive prices. Although no market can function without demand, merely creating a demand is not enough. It is also necessary to develop institutional capacity within the country to cope with executing work through a private contracting industry (Shiferaw, 2012).

2.6 Contractors grading in Ethiopia

Contractors of categories "GC", "BC" and "RC" assume grades that range from 1 down to 10. Contractors may register in one of the 1 to 10 grades categorized based on equipment, man power and turnover requirement. Contractors of categories GC (general contractors), BC (building contractors) and RC (road contractors) register as follows: (MoWUD Directive No 19, 2013).

The threshold project size of different categories of contractors with their according construction cost is put in this directive as table 2.1 below.

Table 2.1 Threshold project size for the different categories and grades of contractors

Categories	Grade	Construction Cost (Birr)		
		BC	RC	GC
(GC,BC,RC)	1	Above 210,000,000	Above 300,000,000	Above 350,000,000
(GC,BC,RC)	2	Up to 210,000,000	Up to 300,000,000	Up to 350,000,000
(GC,BC,RC)	3	Up to 160,000,000	Up to 225,000,000	Up to 270,000,000
(GC,BC,RC)	4	Up to 110,000,000	Up to 154,000,000	Up to 185,000,000
(GC,BC,RC)	5	Up to 54,000,000	Up to 76,000,000	Up to 100,000,000
(GC,BC,RC)	6	Up to 27,000,000	Up to 38,000,000	Up to 45,000,000
(GC,BC,RC)	7	Up to 11,000,000	Up to 15,000,000	Up to 18,000,000
(GC,BC,RC)	8	Up to 5,400,000	Up to 7,500,000	Up to 9,000,000
(GC,BC,RC)	9	Up to 3,000,000	Up to 4,200,000	Up to 5,000,000
(GC,BC,RC)	10	Up to 1,000,000	Up to 1,500,000	Up to 1,800,000

Challenges of lower grade contractors in Addis Ababa

Equipment requirement for registration of general contractors (GC) is shown below. Here, grade 7 general contractors are required to have one pick up while the remaining grade 8, 9 and 10 are not required to have a pick up as mentioned below on Table 2.2.

Table 2.2 Equipment requirement for registration of general contractors (GC)

Item	EQUIPMENT	GRADES									
		1	2	3	4	5	6	7	8	9	10
1	Minimum Number of Dozer	4	3	2	1	-	-	-	-	-	-
	Minimum Capacity (HP)	140	140	140	140						
	Total Capacity (HP)	680 Hp	480 Hp	340 Hp	140 Hp						
2	Crane - Tower Crane - Minimum Tower Height =30 m - Minimum lifting capacity 1 tonne - or - Telescopic Mobile crane with Boom extendable up to 20m and above minimum lifting capacity 5 tonne	1	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-
3	Minimum Number of Loader	2	1	1		-	-	-	-	-	-
	Total Bucket Capacity (m ³)	3.5	1.5	1.2							
4	Minimum Number of Crusher	2	1	1	-	-	-	-	-	-	-
	Minimum Crusher Capacity (tonne/hr)	60	60	40							
	Total Crusher Capacity (tonne/hr)	120	60	40							
5	Minimum Number of Grader	2	2	1	1	-	-	-	-	-	-
	Minimum capacity (HP)	100	100	90	90						
	Total Horse Power (HP)	250	200	90	90						
6	Minimum Number of Excavator	2	1	1	-	-	-	-	-	-	-
	Minimum Capacity (tonne)	20	20	20							
	Total Capacity (Tone) 0.5m ³ or above	45	20	20							
7	Minimum Number of Roller (vibratory, pneumatic)	3	2	1	-	-	-	-	-	-	-
	Minimum Number of Roller (static)				1						
	Minimum Weight of a Roller	10	10	8	8						
	Total Weight of Roller	36	26	8	8						
8	Minimum Number of Dump Truck	8	6	4	3	2	1	-	-	-	-
	Minimum Capacity of Dump Truck	10	10	10	7	7	7				
	Total Capacity of Dump Truck	100	75	50	25	20	7				
9	4W Drive	2	1	1	0	-	-	-	-	-	-
10	Pick Up (5 quintals & Above)	4	3	2	1	1	1	1	-	-	-

Challenges of lower grade contractors in Addis Ababa

Equipment requirement for registration of road contractors (RC) in Table 2.3 shows that contractors from grade 7 up to grade 10 are not required to have any equipment.

Table 2.3 Equipment requirement for registration of road contractors (RC)

Item	EQUIPMENT	GRADES									
		1	2	3	4	5	6	7	8	9	10
1	Minimum Number of Dozer	3	2	1	-	-	-	-	-	-	-
	Minimum Capacity (HP)	140	140	140							
	Total Capacity (HP)	480	340	140							
		Hp	Hp	Hp							
3	Minimum Number of Loader	2	1	1	1	-	-	-	-	-	-
	Total Bucket Capacity (m ³)	3.5	1.5	1.0	0.6						
4	Minimum Number of Crusher	2	1	1	-	-	-	-	-	-	-
	Minimum Crusher Capacity (tonne/hr)	60	60	40							
	Total Crusher Capacity (tonne/hr)	120	60	40							
5	Minimum Number of Grader	2	2	1	1	1	-	-	-	-	-
	Minimum capacity (HP)	100	100	90	60	40					
	Total Horse Power (HP)	250	200	90	60	40					
6	Minimum Number of Excavator	2	1	-	-	-	-	-	-	-	-
	Minimum Capacity (tonne)	20	20	-							
	Total Capacity (tonne) 0.5m ³ or above	45	20	-							
7	Minimum Number of Roller (vibratory, pneumatic)	3	2	1	-		-	-	-	-	-
	Minimum Number of Roller (static)				1	1					
	Minimum Weight of a Roller	10	10	10	8	4					
	Total Weight of Roller	36	26	10	8	4					
8	Minimum Number of Dump Truck	6	5	3	2	1	-	-	-	-	-
	Minimum Capacity of Dump Truck	10	10	10	7	7	-				
	Total Capacity of Dump Truck	75	60	35	20	7	-				
9	4W Drive	2	1	1	-	-	-	-	-	-	-
10	Pick Up (5 quintals & Above)	4	3	2	1	1		-	-	-	-

Challenges of lower grade contractors in Addis Ababa

Equipment requirement for registration of building contractors (BC) table shows that grade 7 contractors are required to have one pick up while contractors ranging from grade 8 up to grade 10 are not required as shown on Table 2.4.

Table 2.4 Equipment requirement for registration of building contractors (BC)

Item	Equipment	Grade									
		1	2	3	4	5	6	7	8	9	10
1	Loader										
	Minimum Number	1	1	-	-	-	-	-	-	-	-
	Minimum Bucket capacity (m ³)	1.5	1.2	-							
	Total Bucket Capacity (m ³)	1.5	1.2	-							
2	Minimum Number of Excavator	2	1	1							
	Minimum Capacity (metric tonne)	20	20	15							
	Total Capacity (metric tonne)	40	20	15	-	-	-	-	-	-	-
3	Tower Crane										
	Minimum tower height = 30 m										
	Minimum lifting Capacity 1 Ton & above	1	-	-	-	-	-	-	-	-	-
	OR										
	Telescopic mobile crane with boom extendable										
	up to 20 m										
	Minimum lifting Capacity 5 Ton & above	1	-	-	-	-	-	-	-	-	-
4	Minimum Number of Dump truck	6	5	3	2	1	1	-	-	-	-
	Minimum Capacity of Dump Truck	10	10	10	10	10	7				
	Total Capacity of Dump Truck	75	60	35	25	10	7				
5	Pick-up (5 quintals & Above)	3	2	1							
	Pick-up (4 quintals & Above)				1	1	1	1		-	-

For the purpose of this research, the name small grade contractors is used to refer construction contractors from grade 7 up to grade 10 that can take a project cost of 18 million according to Ministry of Construction of Ethiopia.

According to World Bank, There are 5 different types of contracting organization, which are capable of undertaking construction work (World Bank 1984 and Relf 1987).

1. Small builders and ‘jobbers’ - these are small generally one-man businesses who undertake building projects or work for other larger companies.
2. Communal and self-help groups
3. State owned organizations
4. Private contracting companies/ enterprises
5. Foreign contractors

Traditionally in low income and emerging countries, the majority of civil engineering work, has been undertaken by large international contractors or state owned organizations. The indigenous private sector is usually dominated by a few large contractors who are able to compete against, or work in joint ventures with the international contractors. This handful of large contractors works alongside a surplus of small construction businesses. This situation has been referred to as the “missing middle” of the construction sector (Young, 1993) where small businesses appear unable to develop and expand their market share to become medium sized contractors and eventually, hopefully, become a large contractor able to undertake large infrastructure projects.

These small contractors are therefore restricted, due to their size and resources, to undertaking small building work and occasional minor civil engineering work. Many of these businesses are often small enough to be ‘invisible’ to national construction statistics (Mosissa, 2013).

(Dlungwana and Rwelamila, 2003) states that contractors can be distinguished from each other by variables such as the size of annual turnover, capacity and capability. The challenges facing small and medium-sized contractors can be distinguished between those that affect small-scale contractors and those that affect medium-sized contractors. Some key features of small-scale contractors are that they are largely unregistered, operate in the informal sector of the economy and have very little formal business systems. The small-scale sector comprises the largest percentage of total contractors, although they employ very few permanent staff, usually less than ten employees. The conditions in developing countries present additional challenges, which include, amongst others, the lack of resources for training contractors, such as funds, poor

construction procurement systems and lack of management capacity and resources to equip managers to operate their business enterprises effectively and efficiently.

Kayanula and Quartey (2000:9) observed that *“there is no single, uniformly acceptable definition of a small firm. Firms differ in their levels of capitalisation, sales and employment. Hence, definitions which employ measures of size (number of employees, turnover, profitability, net worth), when applied to one sector, could lead to all firms being classified as small, while the same size definition, when applied to a different sector, could lead to a different result”*.

The first attempt to overcome this definition problem was by the Bolton Committee (1971) as reported in Kayanula and Quartey (2000:7) *“.....when they formulated an “economic” and a “statistical” definition.”*

Under the economic definition, a firm is regarded as small if it meets the following three criteria:

- *“Has a relatively small share of their market place”;*
- *“Is managed by owners or part owners in a personalised way, and not through the medium of a formalised management structure”;* an
- *“Is independent, in the sense of not forming part of a large enterprise”*

The Bolton Committee also devised a “statistical” definition to be used in three main areas:

- *“Quantifying the size of the small firm sector and its contribution to gross domestic product (GDP), employment, exports among others”;*
- *“Comparing the extent to which the small firm sector’s economic contribution has changed over time”;* and
- *“Applying the statistical definition in a cross country comparison of the small firm’s economic contribution”* (Chilipunde, 2010).

The Bolton Committee Definitions of Small Firms

Table 2.5 The Bolton Committee Definitions of Small Firms

Sector	Definition
Manufacturing	200 employees or less
Construction	25 employees or less
Mining & Quarrying	25 employees or less
Retailing	Turnover of £50,000 or less
Miscellaneous	Turnover of £50,000 or less
Services	Turnover of £50,000 or less
Motor Trades	Turnover of £100,000 or less
Wholesale Trades	Turnover of £200,000 or less
Road Transport	Five Vehicles or less
Catering	All excluding multiples and brewery – managed houses

2.7 Importance of small sized contractors

According to Mahembe (2011), policy makers and economists agreed that small and medium enterprises (SME) contributed greatly to economic growth. A vibrant and healthy small to medium enterprise sector creates employment, increases production volumes, increases exports, promotes innovation and promotes entrepreneurship. Small and medium enterprises employ 22 % of the adult population in developing countries and account for 90 % of private businesses in African countries. SME contribution to employment and GDP in developing countries stands at more than 50 %. Halim et al. stated that developing countries have the highest number of construction workers. The construction sector also contributes between five percent and nine percent of total gross domestic product (GDP) in developing countries. For the economy to fully utilize construction small and medium enterprises, however, there must be a broad understanding of external environmental factors pertaining to the construction industry affecting them. Contractor capabilities, productivity, ways of optimizing competitiveness, growth factors, performance and sustainability are some of the environmental factors that affect construction SMEs. Enabling environments that seek to address challenges facing SME contractors must therefore be determined (Chadhliwa, 2015).

2.8 Ethiopian and International experience with regard to small grade contractors

2.8.1 Challenges of micro and small enterprise (MSEs) development in Ethiopia

Like the industry in other developing countries, the construction industry in Ethiopia is plagued by many problems. According to (Yimam, 2011) the current state of the industry is characterized by an inadequate capital base, old and limited numbers of equipment and low levels of availability and utilization, severe shortage of construction materials, most notably cement, low level of management, especially project management knowledge and practice (low level of contract administration, project planning and project monitoring capabilities), deficiencies in technical, financial management and entrepreneurial skills, small-scale local contractors which lack experience in construction management, limited experience and participation of the private sector in large construction project or the provision of related consulting services, outdated technology (insufficient and ineffective labor-based construction technology), inadequate and inappropriate project organization structures, which lead to problems of authority, responsibility, communication and coordination, etc.

Generally speaking, there is not enough construction and management capacity in the country. The practitioners (in Ethiopia) are less experienced in project management. The management of construction project is highly influenced by the utilization of scarce financial and physical resource with controlling activities limited to cost and time monitoring dimensions only.

In Ethiopia, MSEs are confronted with various problems, which are of structural, institutional and economic in nature. Lack of capital, working premises, marketing problems, shortage of supply of raw materials and lack of qualified human resources are the most pressing problems facing MSEs. Although the economic policy of Ethiopia has attached due emphasis to entrepreneurship values and appreciation of the sector's contribution to the economy, there are still constraints related to infrastructure, credit, working premises, extension service, consultancy, information provision, prototype development, imbalance preferential treatment and many others, which therefore need proper attention and improvement. It is in this context that the Ethiopian Micro and Small Enterprises Development Strategy was conceived and developed (Seyoum et al., 2016).

Contractors cannot properly administer contract, most of them are not properly trained to prepare cost and schedule reports, quality records, safety reports, change order records, claims records, progress reports, payment requisition, etc. Most local contractors even don't have claim management knowledge or are not interested to pursue legitimate claim for fear of damaging working relationships and their reputation in the industry as they will be dealing usually with few public institutions.

2.8.2 The role of small and medium sized contractors in the economies of developing countries

A number of definitions can be put forward to describe small and medium-sized enterprises (SMEs) enterprises in the construction industry. Small and medium-size contractors comprise by far the largest proportion of contractors in the industry. Whilst individual enterprises employ few permanent staff, usually fewer than ten employees per enterprise, this sector is still the largest employer. For example, the Singapore Construction Industry Development Board (1996) found that 73% of total construction industry employees employed by contractors in Singapore were employed by small and medium-sized contractors. Similar trends have been reported in many other countries. It is thus clear that a development intervention focused on small and medium-sized contractors can have a huge impact on the economic development of developing countries in terms of providing management skills that the enterprise creates sustainable employment. There are a number of additional benefits that can be realized, such as increased spending in the local economy through participation of local enterprises, growing entrepreneurship pool among the country's citizens and improved delivery of infrastructure through the use of competent contractors.

A starting point for many construction industries in developing countries should be to address industry constraints at a basic level by gearing local contractors to deliver effectively on local projects. While not all SMEs will thrive and be successful, a few good contractors will emerge to become more sustainable and globally competitive. In the long run, globally competitive medium-sized contractors could, through mergers or organic growth, grow to become large contractors able compete across international borders – a sector that has become extinct in many developing countries.

Kesper (2000) suggested that small, medium and micro enterprises are the real potential engines of wealth creation, value reorientation, job creation and poverty eradication in developing countries of Africa. There are, therefore, sound economic and social reasons for promoting SMMEs:

- Micro enterprises are generally associated with more labor intensive production and are hence perceived to have a high labor-absorptive capacity
- From the economic point of view, it is generally believed that optimizing the contribution of micro enterprises to employment and economic development could be translated into the following broad objectives:-
 - Raising the rate of formation of new micro enterprises with growth potential and increased contribution to investment, employment and income generation
 - Increasing the rate of economic ownership; increasing the rate of graduation of micro enterprises into larger categories
 - Raising the performance of existing micro enterprises with a view to increasing their competitiveness and
 - Decreasing the undesirable mortality rate of micro enterprises (Mosisa, 2013).

2.8.3 Challenges faced by emerging contractors in South Africa

The challenges faced by small and medium contractors can be distinguished between those that affect small-scale contractors and those that affect medium-sized contractors. Small and medium contractors are facing increased competition due to the long-term real decline in demand, and many contractors have responded by shedding labour. The larger contractors have also responded by moving into the international market. Small local contractors, in particular, are furthermore subject to volatilities due to the geographic distribution of construction and the peak workloads that characterize construction projects, which has further reduced their ability to build capacity. Emerging contractors are subject to the same market forces described above for small contractors. However, in addition, while emerging contractor development policies were intended for black economic empowerment, small government contracts have in fact been used

as a job creation opportunities. This has resulted in an overcrowding of this market, and increased financial failures of emerging contractors (Kesper, 2000).

Lack of effective management during their early stages is a major cause of business failure for small and medium sized contractors. Owners tend to manage their businesses themselves as a measure of reducing operational costs. Poor record keeping is also a cause for startup business failure. In most cases, this is not only due to the low priority attached by new and fresh entrepreneurs, but also a lack of the basic business management skills. Most business people, therefore, end up losing track of their daily transactions and cannot account for their expenses and their profits at the end of the month. During the early stages of some business startups, owners were unable to separate their business and family/domestic situations. Business funds were put to personal use and thus used in settling domestic issues. This has a negative impact on profitability and sustainability. Some owners/managers employ family members simply because of kinship relations. In some cases, these have turned out to be undisciplined and ineffectual, a factor that has led to eventual and sometimes rapid failure of businesses. This relative lack of success facing emerging contractors in South Africa was discussed by International Labour Organization-ILO (1987) as follows: Inadequate finance and inability to get credit from suppliers; Inability to employ competent workers; Poor pricing, tendering, and contract documentation skills; Poor mentoring; and fronting for established contractors; Lack of entrepreneurial skills; Lack of proper training; Lack of resources for either large or complex construction work; Lack of technical, financial, contractual, and managerial skills; and late payment for work done.

The Department of Public Works (DPW) has since 1995 has been actively involved in conceptualizing and implementing programs to promote emerging contractors in the built environment. Through these programs, the DPW has increased participation of previously disadvantaged individuals in the mainstream economy. Moreover, it increased economic activity in an economically depressed environment. Previous contractor development programs have focused on the under R500 000 range, which has been found not to be a sustainable market given the number of new entrants to the market. This resulted in few of the contractors being sustainable and the cost of contractor development consequently being extremely high compared to the sustainable result.

The challenges faced by the emerging contractors include: the co-ordination and management of the many facets of the different program; maintaining focus on sustainability against pressures to roll-out too rapidly; reaching target market with information about the opportunity; sourcing mentors with the requisite skills and experience; the large numbers of contractors targeted requires large numbers of trainers and mentors which are not readily available, and are costly; the available resources to effectively and efficiently monitor, evaluate and facilitate programs are limited; An integrated development approach requires considerable support from senior management of public sector clients and considerable inputs from officials; programs lack sustainability; while public sector clients have done a lot for contractor development, particularly in the area of policy, there are still many issues that must be addressed at operational level, such as late payment cycles; procurement policies should encourage longer contract periods and move away from frequent tendering which is both expensive and disruptive; more qualifications need to be developed that are targeted at the specific needs of small and emerging contractors; there is a lack of access to affordable finance; emerging contractors lack demonstrable credit and track records. The following are the major constraints faced by emerging contractors' development and growth:

2.8.3.1 Skills related barriers to construction emerging contractors' development and growth

South Africa is characterized by a systematic under-investment in human capital. This has resulted in a labour force with a skewed distribution of craft skills, career opportunities and work-place experience. While the promulgation of the Skills Development Act of 1997 is commendable, micro enterprises already express concern about the administration costs of recovering levies in the form of grants for training undertaken, the costs of designing a workplace training program as an alternative to using external training institutions and the relatively high charges by private training institutions after the closure of the former industrial training boards which had been subsidized through levies from industry (Kesper, 2000).

2.8.3.2 Financial barriers to construction emerging contractors' development and growth

Efforts to promote SMME access to finance might have more impact on development and growth but access is limited and cost of capital is high. While government has made some efforts to increase accessibility to finances, the targeted programs have had limited success because awareness and usage of existing promotional programs is very low. In addition to insufficient access, high interest rates also pose a constraint to micro enterprise growth. Moreover, (Gounden, 2000) reports that there are core difficulties seen in terms of discrimination by financial institutions against micro enterprises with little collateral, difficulties in accessing information and lack of market exposure. The inadequacy of external finance at the critical growth/transformation stages of micro enterprises deters the enterprises with growth potential from expanding (Nissanke, 2001).

2.8.3.3 Legal barriers to construction emerging contractors' development and growth

With regard to legal barriers, a commonly perceived constraint of micro enterprises is the labour laws which are said to raise the cost of employment artificially prolong retrenchments or corrective action and do not allow for adequate flexibility especially in wage settings and the arrangement of working time. As a result enterprises feel a profit squeeze and impact on the willingness to create jobs (Bhorat et al., 2002).

2.8.3.4 Critical success factors for small and medium contractors

(Young et al., 1991) suggest that contractor's project and financial management ability is a critical success factor. (Kotler, 2002) states that the ability of a contractor to market himself among the industry role players is a critical success factor. (Yussof, 1995) state that experience and management expertise of the owner is critical success factor. (Jaafer et al., 2004) state that entrepreneurial characteristics in forms of creativity and need for achievement are critical success factor. (Yisa et al., 1996) states that the ability of a contractor to maintain good relationship with clients, suppliers, and other role players is a critical success factor. (Upson, 1987) insists on the ability for financial gathering and management as critical success factor for small, medium and large contractors. (Jaafer, 2005) surveyed 172 SME's contractors in Malaysia and concluded from what they call Resource-Based-View that contractor success lies in project and financial management capability, marketing and supply chain relationship; however, they

state that educational background and owner-manager characteristics are not necessarily success factors because competent skill can be employed to run the firm. (Miller, 1962) from his 35 year construction experience examines the views of contractors who emphasized that their survival in this competitive industry depends on the understanding of requirements, progressive in estimating, scheduling, purchasing, organizing, controlling project activities, knowing what has been done and how, and being flexible enough to adjust to changing situations, are all important success factors. (Holroyd, 2003) says that success depends on competent skills, adequate resources, proper timing of activity planning and performance, teamwork, effective communication, fair dealing with people, honesty and integrity are essential (Thwala, 2010).

2.8.3.5 Emerging contractors of South Africa

Motivated by South African government tender rules, a number of South African contractors have established associations and joint ventures with emerging contractors. It is suspected that many of these associations are token or pro-forma, although a thorough investigation has not been pursued due to difficulties in obtaining information. A number of other emerging contractors have established building companies and have focused on the low cost housing market. In some cases these have encountered difficulties in maintaining quality standards.

Yet other emerging contractors have set up companies specializing in transport or/and labour and supply and have entered the sub-contract market, rendering services to the larger established contractors. It is felt that the whole emerging contractor issue deserves further and deeper examination.

It is well known that leading first world countries have adopted free market economies and have restricted the role of the State to certain basic activities. Control of private companies has been relaxed and their development encouraged, especially in the world market. International competition, world trade and the emergence of the electronic market are expected to lead to a reduction in the prices of goods and services and to allow the access of developing countries to international investment and cheap imports. Following the lead of the US and European countries, development banks and the IMF are imposing this economic model on developing countries, forgetting that today's developed countries reached their present status only after protracted periods of growth under protected conditions. It is well known too that today's powerful international contractors were developed within strong, protected home markets and

their international status was often achieved with the help of export credits supplied by their governments and often open government support. It is no accident therefore that the international market is dominated by contractors from the US, Japan, China, UK, France, Germany, Italy and Korea. The first proposed solution to the problems of contractors from small developing countries therefore is to provide donor and government support to regional contractors, to enable them to develop and mature. The second solution involves the association of regional contractors to form strong groups (Thwala, 2010).

2.8.3.6 Government support for emerging contractors

Governments usually encourage international investors to establish industries in their countries by providing tax holidays, free land, low cost energy and other incentives. In the same way governments could support the development of their own emerging contractors with the following measures:

- Management training
- Interest free loans
- Tax holidays
- Subdividing government contracts into small value packages with, however, the overall contract being managed by a large local management contractor, and not by the government contracting department.
- Obliging tenderers for government contracts to joint venture with emerging contractors i.e. not to subcontract to them but to partner them.

In order to shield emerging and regional contractors from the multinationals, tenders for all donor-supported contracts within the region could give a 15% preference to emerging and regional contractors respectively. Again, large contracts would be broken up into relatively smaller packages with an overall local or international management contractor coordinating the whole.

This procedure could be adopted by emerging and regional contractors. The use of IT in this respect has been described in an accompanying paper on the development of consulting organizations in emerging countries. The procedures described could be adapted to small, medium and large regional contracting organizations.

For this to be successful it is felt that strong representative organizations are needed, to represent emerging and established contractors respectively. The advantages are, evidently, dilution of risks and start-up costs (Thwala, 2010).

2.8.4 Factors affecting the performance of small indigenous contractors in Papua New Guinea

Small indigenous contractors in Papua New Guinea face similar problems as small contractors in other developing countries and their performance is thought to be poor.

2.8.4.1 Cash flow

Small contractors in developing countries are often the ones on the fringe of the construction industry and undertake work unwanted by the large contractors. Most of their work, comprising construction, maintenance and refurbishment work is from the public sector. Consequently, they are likely to be greatly affected by the state of the country's economy because of, for example, changes in the government's expenditure policy. As most government agencies experience financial problems, there are delays of payments to contractors – with a consequent adverse effect on the contractor's cash flow. This then affects the operation of the contractor, ultimately hindering the projects from being delivered as required. Many small contractors also experience difficulties in obtaining money from financial institutions to finance their business due to the high levels of bankruptcy in the industry; hence the initial capital for the business must come from the contractor. In addition, most small and medium contractors in developing countries have very limited funds as they are seldom able to offer the necessary fixed assets as collateral. Small contractors therefore operate on very tight budgets, and when they make a loss on one project they tend not to have sufficient resources to continue in business (Stretton, 1984). Stretton further noted that the success of small indigenous contractors is dependent on the type of contract used - lump sum contracts requiring contractors to have sufficient finances for purchasing materials and paying workers.

In Papua New Guinea, all public funded projects are let on lump sum contracts with funds only released to contractors for payment of work done. The National Housing Corporation, being aware of contractors' cash flow problems, make weekly payments to contractors. However, the

contractors still experience problems with delay in progress payments. Many small local contractors do not have credit arrangements with major building materials suppliers or financial institutions, and operate on a cash basis. Delays in payment are therefore expected to greatly affect their cash flow (Stretton, 1984).

2.8.4.2 Construction management skills

Deficiency in planning and management skills is said to be the greatest single problem for small-scale contractors generally. In developing countries, the local construction industry lacks the capacity and capability of undertaking large construction projects, resulting in the continual domination of expatriate construction companies in undertaking all major construction projects. Consequently, smaller companies find it hard to acquire experience in their type of project leading to contractors with limited management and technical skills. This affects their ability to acquire building materials, manage their workers, successfully bid for work and generally contributing to poor performance. Given the fluctuation in the building industry, employment in the construction industry in third world countries offers less employment security. In addition, small contractors in developing countries experience a shortage in skilled labour due to the salary and the security of employment offered by large construction companies being greater than that offered by the small contractor. Furthermore, more young graduates are being assigned to oversee projects and their “lack of skills and experience at both the supervisor and worker level” has been a contributing factor (Stretton, 1984).

2.8.4.3 Contract documentation

Inappropriate contract documents have been identified as one of the most common problems affecting the operation of small contractors. In developing countries, most public sector clients do not use a standard set of contract documents and building plans. The methods of construction are also different which often confuses the contractors. In Papua New Guinea, public housing construction drawings provided by National Housing Corporation are based on the assumption that the site is flat. Any site work is considered as extras and the contractor can claim for work done. However, extra work is not paid for until after practically completed when all extra work is measured and paid out. This places a consequent strain on the contractors’ cash flow (Stretton, 1984).

2.8.4.4 Working relationships

Overall in Papua New Guinea most small indigenous contractors often do not want a bad working relationship with the client, given that this may jeopardize their chances of getting any further work. Clients are hard to find and easy to lose and a contractor who finishes a contract on time and with a good reputation will be one step ahead of his competitor when the next invitation to tender comes along. However, small indigenous contractors have been known to express disappointment with their working relationship with the client's representative - mainly because of the unsympathetic attitude to the contractor's problems regarding shortage of materials and the delay in payments (Stretton, 1984).

2.8.4.5 Facilities and equipment

Given the size of their company, many local contractors that are owner managed and operated, run their work from their own residence. Without office equipment like fax and photocopying machines, urgent information or queries take time to reach the parties concerned (Stretton, 1984).

2.8.4.6 Communication

Communication in small firms is often good, although poor communication skills of the manager can be a problem. In developing countries, there is often no means of communication between the workers on site and the contractor's office. Urgent site problems, therefore, cannot be solved immediately because the site workers cannot talk to their manager or owner. In Papua New Guinea, the National Housing Corporation site representative cannot communicate urgent information to the contractor, thus it has to be relayed through the workers on site. This may lead to information being given to the wrong person or the information being misinterpreted when relayed. The International Labour Organization (1987) has further noted that the level of supervision by the client can also affect the performance of the contractor if the client supervisor is not qualified, or there is no effective communication between the contractor and the client. Shortage or the lack of client supervision staff in some developing countries also contributes to the contractor's problem. This may result in the contractor doing remedial work, which can be very costly for small contractors – reducing profit margins and putting a strain on cash flow (Stretton, 1984).

2.8.4.7 Cultural impact

‘Wantokism’ is the common cultural problem in PNG and is thought to lead to the downfall of local construction companies. As in all business ventures in Papua New Guinea that are family owned, members of the family are employed to work for the company. Local building contractors also employ people from their family, the clan and the village. It has been found that, when a contractor employs only relatives, work input is very low when the owner is away from the site. Local contractors in Papua New Guinea are often culturally pressured to employ more of their relatives to maintain a relationship with the village. If the contractors decide otherwise and hire workers from outside the village they are alienated from the village (Stretton, 1984).

2.8.4.8 Financial management skills

Small contractors have very low financial reserves and use the profit from ongoing projects to finance their next project; hence a loss in one project ultimately leads to a cash flow problem and liquidation (Stretton, 1984). As stated by Wasi and Skitmore, this is exacerbated by the tendency for small contractors in developing countries to take money out of the business for spending on personal items such as cars or a new house. Most indigenous contractors in Papua New Guinea are owner operated who also control the company financial matters. It is likely therefore, that project funds will sometimes be channeled into other personal matters which consequent financial strain to the projects. In addition, delays in contractor payment caused by the cumbersome process of making contractor payments in the public sector create financial problems for the contractor. Unless well managed, this delay is very damaging to contractors who are operating in a location remote from the client.

2.8.5 Problems facing small and medium size contractors in Swaziland

From the findings of Research made by (Thwala and Mvubu, 2009), the problems facing small contractors are not unique to Swaziland. The vast majority of construction firms are small enterprises that rely on outsourcing personnel as required. This has severely affected skills training and the retention of expertise in the industry as construction workers become highly mobile, walking in and out of the industry, depending on performance in other sectors of the economy. The impact can be seen in the rigid adherence to management techniques and

construction practices handed down from colonial times which, as a result of inadequate skills and capacity. Delays with interim and final payments, as well as onerous contract conditions faced by construction firms, can also impose huge constraints on the industry. Many construction firms have suffered financial ruin and bankruptcy because of delays in payment, which are common with government contracts.

From the research conducted it can be concluded that the relative lack of success among the small and medium size contractors in Swaziland is a results of the following problems which must be addressed in order for the contractors to be successful:

- A lack of resources for either large or complex construction work.
- An inability to provide securities, raise insurance and obtain professional indemnity.
- The contracts were inevitably packaged in such a way as to exclude small contractors.
- Inadequacy in technical and managerial skills required in project implementation.
- Lack of continuity in relation to type, scale and location of work
- An inadequate approach and insufficient knowledge, time and experience required for the whole process of finding work, once found, insufficient understanding of the contract documentation and the preparation and submission of tenders.
- Slow and non-payment by government after completing a government project
- Little or inadequate effort has been made to identify the causes of failure among the local contractors in the implementation of construction projects in Swaziland.
- The need for the introduction of a set of rules to govern the construction industry done by an independent body in Swaziland (Thwala and Mvubu, 2008).

2.8.6 Small, medium and micro enterprise contractors in Tanzania

A report of contractor development undertaken by the Tanzania Civil Engineering Contractors Association (TACECA, 2003) noted that current business conditions in Tanzania do not favor the participation of small, medium and micro contractors in the country. For example, local contractors are usually not paid the same rate as foreign contractors and there is, understandably, little support at present from these foreign contractors in developing local contractor capacity the same is true in Ethiopia. The situation is aggravated by limited access to dependable construction

equipment and working capital. According to TACECA, 2003, due to bureaucratic and budgetary constraints, the government has thus far been unable to provide a sustainable environment of continuous work flow for the SMME contractors. The problem is worsened by an inefficient payment process in which payment is delayed for months and this is seen as normal. The deficiencies in contracting and managing contracts are due to:

- Lack of technical skills;
- Lack of experience in preparation of contract documents;
- Poor site organization;
- Poor program design and construction practice;
- Many variation orders;
- Poor equipment; and
- Poor project management.

A need assessment carried out by TACECA (2003) identified the major constraints faced by small, medium and micro enterprise contractors in Tanzania. These are:

- Lack of capital;
- Lack of equipment
- Inadequate training;
- Inadequate access to appropriate technology;
- Inadequate technical and business skills;
- Policy and advocacy issues; and
- Inadequate co-operation among stakeholder (Mosisa, 2013).

2.8.7 Small, medium and micro enterprise contractors in Zambia

Many Zambian contractors have over time found it very difficult to take advantage of economic opportunities due to highly controversial participation schemes which do not favor local small, medium and micro enterprise contractors. A cursory look at the history of the Zambian construction economy during the 1960s and 1970s testifies to the fact that many African countries have a lengthy history of problems in their industry. The market share of Zambian contractors in road construction projects is a mere 17 percent; the rest is in the hands of foreign

contractors. The Zambian experience highlights the critical role that government and other industry stakeholders should play in assisting contractor development. Rwelamila (2002) stated that much of the contractor development effort in South Africa and in other African countries focuses on providing work opportunities to as many contractors as possible, instead of assisting a limited number of contractors to build long-term sustainability. Much of this effort is also characterized by unplanned development interventions that do not promote a culture of continuous improvement and long-term growth of contractors. However, some medium-sized and large construction enterprises in South Africa have been competing successfully in the global markets for some time. Within a period of less than ten years, these contractors have increased their share of external revenue from less than 10 percent to between 30-50 percent of their total revenue. Khoza (2008) suggested that inconsistent procurement and delivery practices and policy environment by clients and consultants also impede the development of contractors. These include:

- Poor designs;
- Flawed tendering procedures;
- Processing of interim and final payments;
- Cash flow and ultimately sustainability of contractors;
- Poor client procurement practices also include focus on lowest price, undermining project delivery and the performance of contractors; and
- The practice of promoting the lowest price is further encouraged by tough competition due to an oversupply of contractors.
- Lack of access to appropriate technology;
- The existence of entrepreneurial oppressive laws;
- Regulations and rules that impede the development of the sector;
- Weak institutional capacity; and
- Lack of management skills and training.

The National Construction Council of Zambia (NCCZ, 2003) observed that some foreign contractors, mostly from mainland China, often turn out to have insufficient experience and/or capacity. They tender for projects and are often, awarded contracts based on low prices with no relation to actual costs. In lean times medium-to-large contractors “down-plunge” to secure

contracts which would normally not be of interest to them. Although they can hardly be expected to profit from such works due to their higher fixed costs in relation to the typical small, medium and micro enterprise contractor, they consider even partial cover of the overheads advantageous. This tendency damages the prospects and growth of the SMME contractors. NCCZ (2003) stated that the so-called “brief-case” contractors, often with the “right connections”, but without proper training or commitment to invest in staff and equipment may register as a contractor and bid for works with the intention of hiring both staff and equipment on a needs-basis. More often than not, they may not even be committed to finishing the work, even after having been granted an advance payment. This tarnishes the image of the SMME contractor. Khoza (2008) citing the National Audit Office Report (2001) and The Construction Task Force Report (1998) in Myers (2004) reported four sets of problems that the construction industry in the developed country is facing. These are:

- The industry demonstrated a poor safety record and inability to recruit good staff;
- There appeared to be no real culture of learning from previous projects, and no organized career structure to develop supervisory and management grades;
- A concern was expressed about the poor level of research and development that restricted the industry’s ability to innovate; and
- Technology was not widely used across the construction industry (Mosisa, 2013).

2.9 Literature Summary

From the different literatures reviewed above, it can be summarized that many studies have been made about the challenges that lower grade contractors face in different aspect of their functionality in developing countries. Although the contribution of lower grade contractors in Ethiopia and their performance in the construction industry is assessed, the specific challenge they face is not studied. Therefore, from the literature reviews it can be deduced that there are many challenges that tends to be obstacles for the performance and existence of lower grade contractors.

2.10 Research Gap

The studies that have been made on lower grade contractors mostly focus on the contribution and factors that affect their performance. The literatures on challenges that lower grade contractors face internationally is reviewed. But the challenges on their functionality, progress and overall presence as a firm have not been studied in the context of Ethiopia. Therefore, what affect the functionality, overall presence and activity of lower grade contractors in Addis Ababa are about to assessed on this research paper.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology used to identify the challenges faced by lower grade contractors in Addis Ababa and it tries to present how the research objectives are achieved. The research instruments, data collection methods, procedures, and the information about sources of data are discussed. Moreover, the sample size and method of analysis are discussed below.

3.2 Research design

The research procedures had been started by gap identification which arises from the nearby activities of friends and contractors in the construction sector of the country. The literatures written on this research title in other countries have also become initiating factors to proceed.

The research design is formulated to select the data sources and these data sources help to select the research instruments and to identify the relevant journal articles, internet sources, books, research papers and company documents to be reviewed.

3.3 Research type

A mixed method research is used that both qualitative and quantitative research methods are used in this research. Mixed method research is an approach to inquiry involving collecting both qualitative and quantitative data, integrating the two forms of data. This is because the qualitative method is used as the responses of the questionnaire can be opinions, personal judgments, views and attitudes. Quantitative research is the systematic and scientific investigation of quantitative properties and phenomena and their relationships. Quantitative method is also applicable since the total amounts of responses collected from the target population, which are grade 7 and below contractors require numerical interpretation.

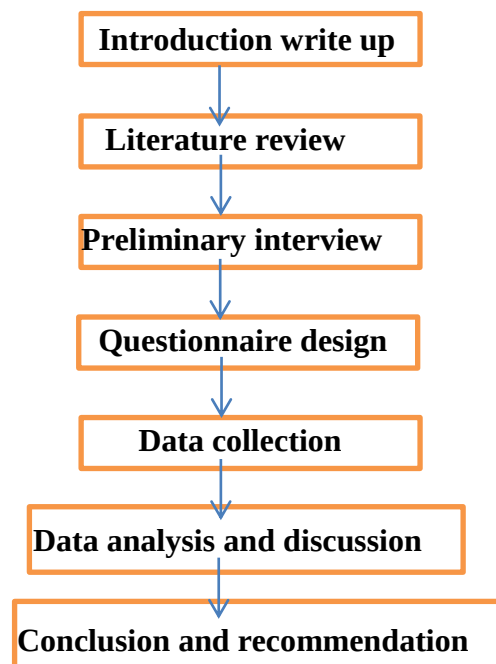
3.4 Data sources research instruments

The research used both primary and secondary data. The primary data are collected through interview and questionnaire whereas the secondary data are collected through journal articles, research papers, websites, and desk study of company documents. The research instruments are desk study, interview and questionnaire. Since respondents might not give the necessary attention to questionnaires, interviews and discussions are used jointly with the questionnaire to collect the reliable data. The desk study is used to gather data about the contractors grading systems and its requirements and other contractors' related information.

3.5 The research population and sampling

The target study groups of the study are lower grade contractors ranging from grade 7 up to grade 10 which are found in Addis Ababa. The lists of contractors are obtained from Ministry of construction of Ethiopia and from this list of contractors; a representative population is selected by using purposive sampling since conducting a research on the total population will be difficult. Representative lower grade contractors and concerned regulatory bodies of government and professionals are respondents and provider of information for this research.

The overall research process is:-



CHAPTER FOUR

ANALYSIS AND DISCUSSION

4.1 Introduction

This project presents challenges of lower grade contractors that range from grade 7 contractors up to grade 10 contractors which are found in Addis Ababa. A general idea of lower contractors' challenges from past studies and international experiences are discussed in the literature section. In addition to that, measures taken to help and develop these lower grade contractors in other countries are discussed. This chapter provides explanations about data collection methods such as interviews, distribution of the questionnaire, collection of responses and subsequent analysis of the data acquired through the responses from professionals who are working in the regulatory offices and lower grade contractors which are the main target of this research.

The principal purpose is to identify the major challenges that are facing lower grade contractors which affect their overall functionality and presence as a firm. After identifying these challenges, ways of capacitating and strengthening these lower contractors by the concerned bodies will be found out and indicated.

4.2 Analysis of questionnaire and interview response

A total of 30 questionnaires have been distributed to lower grade contractors and 21 of them have responded. 10 contractors are requested to make questionnaire based interviews and 7 of them have responded. Two discussions are made with 2 experts from Ministry of Construction. The breakdown of responses is as shown below on Table 4.1.

Table 4.1 Sample breakdown of questionnaire distribution

Item	Description	Number Distributed	Number of Responses	% of Numbers Distributed	% of Number of Response
1	Grade 7 contractors	10	7	100%	70%
2	Grade 8 contractors	10	8	100%	80%
3	Grade 9 contractors	10	7	100%	70%
4	Grade 10 contractors	10	6	100%	60%
	Total	40	28	100%	70%

As shown in the table, the overall response rate of the lower grade contractors is 70%.

4.3 Analysis and discussion of results

Based on the literature reviewed from the various sources and countries, the challenges of lower grade contractors are identified and listed below. The challenges of lower grade contractors, which are considered in the questionnaire, are collected and summarized according to the previous studies as required by this project.

Identified challenges of lower grade contractors

- Lack of effective management(most of them are owner managed)
- Poor record keeping
- Lack of business management skill
- Inadequate finance and inability to get credit from suppliers
- Inability to employ competent workers and shortage of skilled labour
- Inadequate access to appropriate technology
- Poor pricing, tendering, and contract documentation skills
- Poor mentoring; and fronting for established contractors
- Poor communication skills
- Lack of entrepreneurial skills
- Lack of proper training
- Lack of resources for either large or complex construction work
- Lack of technical, financial, contractual, and managerial skills
- Lack of construction management skills
- Late payment for work done
- Cash flow problems
- Policy, regulations, rules and advocacy issues and bureaucratic constraints
- Inadequate co-operation among stakeholder
- Country's economy and governments expenditure policy
- An inability to provide securities, raise insurance and obtain professional indemnity
- The contracts that are inevitably packaged in such a way as to exclude small contractors

- Business conditions that do not favor small contractors
- Lack of continuity in relation to type, scale and location of work
- An inadequate approach and insufficient knowledge, time and experience required for the whole process of finding work, once found, insufficient understanding of the contract documentation and the preparation and submission of tenders
- Corruption, bribery and nepotism

Success factors for lower grade contractors

- Project and financial management ability
- The ability of a contractor to market himself among the industry role players
- Experience and management expertise of the owner
- Entrepreneurial characteristics in forms of creativity and need for achievement
- The ability of a contractor to maintain good relationship with clients, suppliers, and other role players
- The ability for financial gathering and management
- Understanding of requirements
- Progressive in estimating, scheduling, purchasing, organizing, controlling project activities
- Knowing what has been done and how, and being flexible enough to adjust to changing situations

4.3.1 Analysis and discussion of data

a. Background of the respondents

Since the research area is on lower grade contractors which are found in Addis Ababa, all of the respondents (100%) are found in Addis Ababa. Based on the questionnaire and interview, the age of the respondents ranges from 25 up to 40. Table 4.2 shows 100% of the respondents (which are contractors) of this research are owners of the company as well as managers which means owner-managed firms. 23 out of 28 respondents (82%) have construction and related qualification while the remaining respondents (18%) have qualifications unrelated to construction.

Table 4.2 Qualification of respondents

Qualification of the contractors	Percentage
Construction related	82%
Construction unrelated	18%

Contractors' qualification to the field of construction as shown in the table is very high when compared to those contractors that do not have construction related qualification. This helps contractors to realize and understand what the industry requires in a better way than those who do not have background.

b. Contractor firms' years of establishment

13 out of 28 contractors (46% of the contractor) that gave response to this research have 3 years of age and less as a firm. 10 out of 28 contractors (36%) have an age of 3 up to 5 years. 5 contractors out of 28 contractors which is 18% have 5 years and above years as a contractor firm as shown on Table 4.3.

Table 4.3 Years of establishment of firms

Contractor Firms years of age	Number of contractors	Percentage
Less than 3 years	13	46%
3 up to 5 years	10	36%
Greater than 5 years	5	18%

c. Experience of contractors before they get established as a firm

10 out of 28 contractors (36%) have 0 years of experience before they become a contractor firm. Contractors that have an experience of 2 years up to 4 years before the start as a firm are 10 out of 28 contractors which is 36%. Experience of 4 years and above is obtained by contractors that are 8 out of 28 contractors which is 28% as indicated on Table 4.4.

Table 4.4 respondents experience breakdown

Experience of contractors before making a firm	Number of contractors	Percentage
Less than 2 years	10	36%
2 up to 4 years	10	36%
Greater than 4 years	8	28%

A certain level of construction experience, expertise and training are required to manage a sustainable construction company and to meet the needs of the sector. But from the percentages shown on the table, contractors have begun to work as a contractor firm without attaining a lot of experiences as only 28% of them have more than 4 years of experience.

Experience in any kind of management is very important and it plays a crucial role in ensuring that a business succeeds or fails. Poor management has been posited as one of the main causes of failure of small enterprises (Longenecker, et al., 2006). Lack of experience in the constructions industry can lead the manager to make bad business decisions. Good management implies an awareness of all factors making up a successful business namely good strategy, marketing, pricing and financial control. Financial mismanagement and management incompetence have been cited among the attributes that lead to the prominence of construction failures. (Douglas, 1985)

d. Initial capital of contractors

Table 4.5 shows 25 out of 28 contractors (89%) have an initial capital of less than 100,000 birr while 3 out of 28 contractors (11%) have an initial capital between 100,000 and 300,000. No contractor (0%) had an initial capital of greater than 300,000 birr.

Table 4.5 Initial capital of contractors

Initial capital	Number of contractors	Percentage
Less than 100,000 birr	25	89%
100,000 up to 300,000birr	3	11%
Greater than 300,000 birr	0	0%

e. The time they get a project to execute

8 out of 28 contractors (28%) have executed project work within 6 months while 5 out of 28 contractors (18%) have got a project work in the time between 6 months and 1 year. The rest 15 contractors out of 28 contractors which are 54% of the total have never got a project before 1 year as Table 4.6 shows.

Table 4.6 Last time of project execution

Time contractors get a project	Number of contractors	Percentage
Within 6 months	8	28%
Between 6 months and 1 year	5	18%
1 year ago	15	54%

More than half percent of these lower grade contractors have become idle for over one year as it is shown in the table. This shows that lower grade contractors cannot get a project easily and frequently. The availability of works and the ability and effort to get them is the main factor for a lower grade contractor to stay in the construction industry. Otherwise, lower grade contractors are forced to leave the construction sector.

f. Means of getting a project

8 contractors out of 28 contractors (28%) have responded that they have got a project through tendering. 5 out of 28 contractors (18%) have responded that they get a job by personal contact and communications while 15 out of 28 contractors (54%) have responded that they get a job from job opportunities created by government. Table 4.7 shows there are also contractors that get a job by both tendering and personal contacts and by whichever ways they can get.

Table 4.7 Respondents' means of getting project

Ways of getting a project work	Number of contractors	Percentage
Tendering	8	28%
Personal contact and communication	5	18%
Through government created opportunities	15	54%

As it is seen in the table, more than half of respondents (54%) acquire a job through government created job opportunities. the other respondents have responded that government have promised to give them a project but they have not got any.

g. Abundance of work

13 out of 28 small grade contractors (46%) believe that there is abundance of work while the remaining contractors which are 15 out of 28 (54%) think there is no available abundance of work as shown on Table 4.8.

Table 4.8 Respondents belief towards availability of works

Abundance of work	Number of contractors	Percentage
Yes	13	46%
No	15	54%

h. Trainings on management/project

As shown on Table 4.9, 13 out of 28 small grade contractors (46%) have taken training on the project or other related issues while 15 out of 28 contractors (54%) have not taken any training before they start to work.

Table 4.9 Respondents response to training

Trainings	Number of contractors	Percentage
Yes	13	46%
No	15	54%

According to ILO, deficiency in planning and management skills is said to be the greatest single problem for small-scale contractors generally. In developing countries, the local construction industry lacks the capacity and capability of undertaking large construction projects, resulting in the continual domination of expatriate construction companies in undertaking all major construction projects as noted by Adam. Consequently, smaller companies find it hard to acquire experience in their type of project leading to contractors with limited management and technical skills. This affects their ability to acquire building materials, manage their workers, successfully bid for work and generally contributing to poor performance. (Wasi and Skitmore, 2001)

i. Financial assistances

13 out of 28 small grade contractors (46%) have been given financial aids from financial institutions while the remaining lower grade contractors which are 15 out of 28 (54%) have never got any financial aids as indicated on Table 4.10.

Table 4.10 response of contractors on financial assistance

Financial assistance	Number of contractors	Percentage
Yes	13	46%
No	15	54%

Many lower grade contractors (54%) experience difficulties in obtaining money from financial institutions to finance their business as it is seen from the results, hence the initial capital for the project must come from the contractor. Lower grade contractors therefore operate on very tight budgets, and when they make a loss on one project they tend not to have sufficient resources to continue in business.

The success of small contractors is dependent on the type of contract used - lump sum contracts requiring contractors to have sufficient finances for purchasing materials and paying workers as noted by Stretton. (Wasi and Skitmore, 2001)

Therefore financial resources are important for any enterprise because it is through them that a company can meet its operational and investment needs.

j. Late payment

Table 4.11 shows that 18 out of 28 contractors (64%) responded they have encountered late payment while 10 out of 28 contractors (36%) said they have got payments on time.

Table 4.11 Contractors response to late payment

Late payment	Number of contractors	Percentage
Yes	18	64%
No	10	36%

Delays in contractor payment caused by the cumbersome process of making contractor payments in the public sector create financial problems for the contractor. Unless well managed, this delay is very damaging to contractors who are operating in a location remote from the client. (Wasi and Skitmore, 2001)

k. Cash flow problems

As indicated on Table 4.12, 23 out of 28 contractors (82%) responded that they have a cash flow problem while 5 out of 28 contractors (18%) said that they don't have cash flow problem.

Table 4.12 Contractors response to cash flow problems

Cash flow problems	Number of contractors	Percentage
Yes	23	82%
No	5	18%

Small contractors in developing countries are often the ones on the fringe of the construction industry and undertake work unwanted by the large contractors. Most of their work, comprising construction, maintenance and refurbishment work is from the public sector. Consequently, they are likely to be greatly affected by the state of the country's economy because of, for example, changes in the government's expenditure policy. As most government agencies experience

financial problems, there are delays of payments to contractors – with a consequent adverse effect on the contractor's cash flow. (Wasi and Skitmore, 2001)

Cash flow problems can be controlled if they are identified and addressed early. If ignored, they can result in increased interest expense, increased investment of owners' capital, diminished credit ratings, inability to take advantage of new opportunities and ultimately, failure of the business as noted by Gavin.

Cash flow problems can be caused by a number of factors, many of which are unrelated to job profits. Examples include:

- Poor advance payment utilization
- Payments made to suppliers or subcontractors before receiving cash payment from the related project
- Low unit rates fixed during tendering
- Cash purchases of fixed assets (Getahun, 2016)

l. Dependency on payment certificates to fund projects

Table 4.13 shows 18 out of 28 contractors (64%) responded that they are dependent on payment certificates to fund projects and 10 out of 28 contractors (36%) responded they are not dependent on payment certificates to fund projects.

Table 4.13 Contractors response to dependency on payment certificates

Dependency on payment certificates	Number of contractors	Percentage
Yes	18	64%
No	10	36%

m. More than one projects at a time

Table 4.14 shows 5 out of 28 contractors (18%) responded that they have executed more than one project at a time while 23 out of 28 contractors (82%) said they have worked more than one projects at a time.

Table 4.14 Contractors response to number of projects they get at a time

More than one project at a time	Number of contractors	Percentage
Yes	5	18%
No	23	82%

n. Material and equipment assistance

All contractors (100%) have responded that they have not got any material and equipment assistance as shown on Table 4.15.

Table 4.15 Contractors response to material and equipment assistance

Material and equipment assistance	Number of contractors	Percentage
Yes	0	0%
No	28	100%

o. Corruption related issues

All contractors (100%) have responded that there are corruption related issues in the construction industry mentioned on Table 4.16.

Table 4.16 Contractors belief towards the prevalence of corruption

Corruption related issues	Number of contractor	Percentage
Yes	28	100%
No	0	0%

p. Increased competition effect on pricing

Table 4.17 shows that 25 out of 28 contractors (89%) have responded that increased competition affects their pricings while 3 out of 28 contractors (11%) responded their pricing is not affected if competition increases.

Table 4.17 Contractors response to the effect of increased competition on pricing

Increased competition affects pricing	Number of contractors	Percentage
Yes	25	89%
No	3	11%

Most of the lower grade contractors (89%) are affected by the competition to win a project. According to the data obtained from Ministry of Construction, there are around 6800 contractors registered for 2009 E.C budget year. Among these contractors, 50% of them (3396) are lower grade contractors which are from grade 7 up to grade 10. These numbers show that there will be high competition of bids among them to win a project so that contractors become desperately ambitious and make low pricing which might lead to bankruptcy and incompleteness of projects.

Construction companies should make realistic bid proposals to win the bid. It is obvious that success does not mean simply winning the bid but completing the project with the highest possible profit-margin. Therefore, preparing accurate and realistic bid proposals during the bidding process, in which the amount of profit is determined, is highly critical according to Arslan. However, due to high competition, companies are generally forced to reduce their profit-margin in order to be the lowest bidder and win the bid. Kangari (1988) found that more than 50% of business failures in the construction industry were due to low profits. As might be expected, competition was considered as the most important sub-factor of low profit margins. (Kivrak, 2008)

q. Government regulations, procedures, policies effect on contractors

As shown on Table 4.18, 18 out of 28 contractors (64%) believes that government regulations, procedures and policies affects their firms' performance while 10 out of 28 contractors (36%) responded that they have never been affected by them.

Table 4.18 Contractors' response to the effect of government regulations, procedures and policies

Government policies, regulations and procedures affect contractors	Number of contractor	Percentage
Yes	18	64%
No	10	36%

From the open ended questions on the questionnaire, small grade contractors have given the following responses.

r. Problems these lower grade contractors are facing

They have responded that late payment, equipment cost, financial problems and loan lending problems, unfair competing environment by group dealings, lack of capacity, unavailability of good workers and labours with low price, overhead costs, pricing problems, government office meetings and bureaucracy resulting in delay of payment, taxation issues, unavailability of projects works, exclusion of small grade contractors in tendering thinking that they are not capable of executing projects to the required quality, prevalence of nepotism, bribery and corruption that leads to unfair competition among contractors, lack of training on project and company management, contractors company management problems are the problems they are facing.

Given the fluctuation in the building industry, employment in the construction industry in third world countries offers less employment security as noted by Stretton. In addition, small contractors in developing countries experience a shortage in skilled labour due to the salary and the security of employment offered by large construction companies being greater than that offered by the small contractor according to ILO. (Wasi and Skitmore, 2001)

s. The reason of lower grade contractors to leave the construction industry

Lack of project works, very few job opportunities, management problems, corruption, poor pricing, unfair competitions, least bidder type of tendering that leads to bankruptcy, lack of capacity, lack of support from government, contractors' internal problems such as lack of commitment and country's economic condition are mentioned by respondents as reasons for small grade contractors to leave the construction industry.

4.4 Summary

All the challenges which are cited from other literatures and studies have listed on the beginning of this analysis and discussion chapter. These mentioned lists of challenges are too many so that depending on them a questionnaire was developed to assess the main challenges faced by lower grade contractors.

The analysis of the respondents' response shows that most of the lower grade contractor respondents have construction related qualification; most of them have established for 3 and less years, only few of these contractors have an experience of 4 years and above. Most (89%) of them have an initial capital that is less than 100,000 birr when they started the firm. More than half of these contractors have not got a project to work. They have also responded that they lack financial, material and equipment assistance, trainings and encountered late payments, cash flow problems. All of them believes that prevalence of corruption, nepotism and bribery make the competition unfair and most of them believes that government bureaucracy affected them.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

This project has identified the challenges faced by lower grade contractors that are found in Addis Ababa. The objectives of this study was to identify these challenges that affect the overall existence and functionality of lower grade contractors and to recommend what should be done by concerned bodies and stakeholders in order to overcome these challenges, to strengthen and capacitate lower grade contractors.

Therefore the following are the main challenges that lower grade contractors are facing in Addis Ababa

1. Initial capital: Many lower grade contractors have low initial capital as a starting up initial of their firm. They don't have enough capital to fund their projects if they encountered late payment.
2. Financial assistances, material and equipment assistance: it is found that many lower grade contractors are not getting the necessary support from financial institutions. Financial accessibilities are critical to support contractors. Material and equipment assistance helps lower grade contractors to develop their project execution capacity and makes them profitable that helps to strengthen their firm.
3. Lack of training: The lack of trainings given to these lower grade contractors by government or private entities on management and related areas before starting up of the firm affects their business management, company management and project management of the projects. Though, some of them have taken training which is good. Lack of trainings will result in inadequacy of technical and managerial skills required in project implementation, lack of continuity in relation to type, scale and location of work, an inadequate approach and insufficient knowledge, time and experience required for the whole process of finding work, once found, insufficient understanding of the contract documentation and the preparation and submission of tenders.

4. Lack of enough project work opportunities: Most lower grade contractors will struggle to get a project work and they do not get a regular work. As it is identified, most of them have spent more than year without getting a project. Getting continuous projects is critical for contractors to stay actively working in the construction sector. There is suspicion of prevalence of corruption, nepotism and bribery: This affects small grade contractors by making the competition unfair and it makes contractors stay idle without getting a project for a longer time. Then lower grade contractors tend to leave the construction industry

5. Late payment: it is identified that lower grade contractors encounter late payment by the clients. Delays with interim and final payments, as well as onerous contract conditions faced by construction firms, can also impose huge constraints on the industry. Many construction firms will suffer financial ruin and bankruptcy because of delays in payment, which are common with government contracts. Lower grade contractors face unfavorable situations of bureaucracy that makes the payment late, unavailability of government officers when they were needed, the variability of procedures from one office to another that does not give same working ground.

6. Lack of well managed cash flow: Since there are delays of payments to contractors, it has a consequent adverse effect on the contractor's cash flow. This then affects the operation of the contractor, ultimately hindering the projects from being delivered as required. Many lower grade contractors also experience difficulties in obtaining money from financial institutions to finance their business due to the high levels of bankruptcy in the industry; hence the initial capital for the business must come from the contractor. All this factors affects the cash flow of small contractors.

5.2 Recommendations

1. Financial institutions need to make the accessibility of finances easier in order to encourage and support lower grade contractors.

2. Trainings should be given to lower grade contractors to enable them manage their own firm by giving technical and management trainings. Financial management, business management, company management and related should necessarily be given to contractors. As it is identified, most of the lower grade contractors have few years of experience when they establish a firm.

This shows that they have little managerial and technical skills to run. Therefore, all the necessary trainings and supports need to be given to these lower grade contractors.

3. To provide a continuous and regular project works is required from the government to capacitate and strengthen lower grade contractors. In order to prevent contractors from financial failure, the clients which are mostly government project offices should make payments on time.

4. To be able to make payments on time is necessary. Clients need to reduce late payment cases by making payments on time.

5. Lower grade contractors should assess about the construction industry and make themselves ready with financial capacity and management skills, tendering techniques, good communication skills in order to be competent and survive in the industry.

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APPENDICES

Addis Ababa Institute of Technology
School of Civil and Environmental Engineering
MENG Program in Construction Technology and Management

Dear respondents,

The objective of this questionnaire is to identify the challenges of small grade contractors (grade 7 up to grade 10) in Addis Ababa

This questionnaire is prepared for data collection of a research on challenges of small grade contractors (grade 7 up to grade 10) in Addis Ababa.

Background Information

1. Age _____

2. Gender _____

3. Academic status of manager?

12 Grade & below

University graduate

4. Is your qualification construction related?

Yes

No

Company Information

3. Contractor grade?

Grade 7

Grade 8

Grade 9

Grade 10

4. How old is your company?

Less than 3 years

3 up to 5 years

More than 5 years

5. Current state of the company

Active Partially Active

Currently Inactive

6. How many years of experience did you have when you start up this company?

0 year

2 years

4 years and above

Challenges of lower grade contractors in Addis Ababa

7. How much was your initial capital when you started up your company?

Less than 100,000 Birr From 100,000 – 300,000 Birr More than 300,000

8. How much projects cost you have executed?

9. When was the last time you have executed a work?

Before 6 months 6 month up to 1 year More than 1 year

10. How do you get most of your project works?

By tendering By personal contact By government created opportunities

11. Do you think there is abundance of work available to execute?

Yes No

12. Have you ever taken training on project management/business management/ company management to run the company?

Yes No

13. Have you ever received financial assistance from financial institutions?

Yes No

If no, from whom do you get?

14. Have you experienced late payment?

Yes No

If yes, how long? _____

15. Is your company dependent on payment certificates to fund those projects?

Yes No

16. Does your company have cash flow problems?

Yes No

17. Do you run more than project at a time?

Yes No

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18. Do you get material and equipment assistance?

Yes

No

19. Do you think corruption related issues are a barrier to get a project?

Yes

No

20. Does increased competition affect your pricing?

Yes

No

21. Do government regulations, policies and legislations affect your company's activity and on running a project?

Yes

No

If yes, how

22. What kinds of problem do you face as a small grade contractor?

23. Why do you think construction companies leave the construction industry?

24. What government support have you got in terms of job creation or other issues?
