An Investigation into the Factors Influencing the Performance of Contractors in Kenya

Monicah Wairimu Chonge, Titus Kivaa, Abednego Gwaya

Abstract: The performance of contractors in the construction industry is very crucial. This is because contractors are the ones responsible in actualizing the dream of the clients. However, the problem of poor performance by contractors has been a challenge in the construction industries of the world. Measured by the various performance indicators of time, cost, quality, client satisfaction, productivity, community satisfaction, profitability, project participants' satisfaction, sustainability of the development, health and safety, communication, environmental protection and functionality of the development, contractors have been found to underperform on most of the aspects. The situation is not different in the construction industry in Kenya. Here, most projects fail to meet the time, cost, quality and the other performance measures. This study thereby sought to find out the degree of influence of the factors that influence the performance of contractors in the construction industry in Kenya. The study employed the mixed method strategy as well as the cross-sectional research design. Qualitative and quantitative data were collected through the use of structured questionnaires which were administered to the local contractors of NCA 1, NCA 2 and NCA 3. These contractors were sampled using the stratified random sampling and systematic random sampling techniques. The data gathered was analyzed using Statistical Package for Social Sciences (SPSS for windows, version 20). The methods used for data analysis were; descriptive statistics and the ranking of the factors using the relative importance index (RII). The analysis of the study revealed that, the factors influencing on the performance of contractors can be clustered in to eight sub factors; financial, labour, construction management, material, design, project management, construction technology and external factors. Financial factors were found to have the greatest degree of negative influence on the performance of contractors with an RII=0.778,followed by; construction management factors (RII=0.622), labour related factors (RII=0.613) and design related factors (RII=0.612). Construction technology factors were found to have less negative influence on the performance of contractors in Kenya with RII=0.533. This was followed by external factors (RII=0.557), materials factors (RII=0.584) and project management factor (RII=0.589). In conclusion, the study recommends that the Kenyan construction industry stakeholders should look into seriously on the four factors that negatively influence on the performance of the contractors if their performance is to improve.

Keywords: Contactors performance, Construction industry, Performance determinants

I. INTRODUCTION

The construction industry plays a major role in the development and achievement of society's goals. Globally,

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The annual value of the construction industry is of the order of 1.5 trillion U.S dollars constituting about 8% of Gross Domestic Product (GDP) and about 60% of Gross Fixed Capital Formation (GFCF). It is also one of the most relevant forces of the world economy representing 7% of its total employment (Njuguna, 2008). Therefore, the production capacity of the industry remains a vital component of the national economy of the country as well as that of the global economy.

In Kenya, the construction industry is a key indicator and driver of economic activity and wealth creation. It is involved in the construction of a wide range of public and private sector facilities such as: transport and communication, water and sanitation, Energy and building projects. Thus the output of construction industry has profound impact on our lives (Macharia, 2015). Despite the economic importance and contributions of the construction industry to the GNP, the industry is faced by various challenges. One of such challenges is the problem of poor contractor performance. For instance, Nyangilo (2012), states that there is evidence that the performance of the contractors in Kenya is poor as time and cost performance of projects are to the extent that over 70% of the projects initiated are likely to escalate with time with a magnitude of over 50% and over 50% of the projects likely to escalate in cost with a magnitude of over 20%. Kibuchi and Muchungu (2012) also, argued that despite the high quality of training of consultants in the building industry in Kenya as well as the regulation of the industry in major urban areas, construction projects in Kenya do not always meet their goals. This they argued that is manifested by myriad projects that have cost overrun, delayed completion period and poor quality resulting to collapsed buildings in various parts of the country, high maintenance costs, dissatisfied clients and even buildings which are not functional. Generally, past industry experiences show that, medium to large size projects have high failure rate in Kenya (Auma, 2014). This study therefore sought to find out the degree of influence of the factors influencing the performance of local contractors.

II. PERFORMANCE INDICATORS

The concept of project success has remained ambiguously defined in the construction industry. This is because it means different things to different people. For instance, Hussaini (2014) gives nine key performance indicators to monitor in any construction project. These are; cash flow, labour productivity, schedule of work and progress, margin variance, unapproved change orders, committed cost, backlog, and finally customer satisfaction. Takim and Akintoye (2014) also identify ten parameters for bench marking projects in order to achieve good performance. These consist seven project performance indicators namely;

construction cost, construction time, cost predictability, time predictability, defects, client satisfaction with the product and client satisfaction with the service; and three company performance indicators namely; safety, profitability and productivity. Cheung et al., (2004) states performance can be measured using various dimensions (groups) such as time, cost, quality, client satisfaction, client changes, business performance, health and safety, sustainable development. Chan and Tam (2000) noted that various other key components are also used in measuring project performance are; health and safety, environmental performance, user expectation / satisfaction, actor's satisfaction, functionality and commercial value. All these factors can be summarized to thirteen indicators; time, cost, quality, productivity, client satisfaction, profitability, community satisfaction, sustainability of the development, project participants satisfaction, health and safety, communication, environment performance and functionality of the development.

III. DETERMINANTS OF PERFORMANCE INDICATORS

3.1 Determinants of cost performance

The issue of cost of construction is one that is rarely from the minds of clients, design team and contractors (Tony, 2013). In fact, the cost of construction work is a primary concern for the vast majority of construction client and has its proven importance as the prime factor of project success (Ahzar et al, 2008). Therefore, for contractors to be competitive, they have to put into great consideration their cost performance.

A contractor is said to have performed well in terms of cost if he is able to deliver the project within the estimated budget. This is usually not the case in most projects as according to researches on the performance of contractors; it is evident that most projects fail to meet the budgeted cost and thus experience cost overruns. Most of the significant factors affecting project cost performance are qualitative such as: *client priority on construction time, contractor's planning capability, procurement methods, market conditions including the level of construction activity* (Elchaig et al, 2005).

Other factors affecting the cost performance by contractors are: *contractor's project inexperience, inflation, incessant variations order, change in project design, project complexity, shortening of contract period, fraudulent practices, unstable economy, inaccurate estimate, overdesign, project site location, force majeure, materials fluctuations, site conflicts, poor workmanship, inaccurate financial provisions, unsteady material supply, unpredictable weather conditions, breach of local regulation, lack of executive capacity by employer* (Xiao & Proverbs, 2003).

3.2 Determinants of time performance

As stated earlier on, the construction schedule/time is affected by some factors which may either be from the participants (client, consultants and contractors) or may be extraneous (Olomolaiye, 1997).
These factors are as listed below:

Client related factors: Clients can influence time performance of any project in the following ways: by initiating many variation orders, through slowness in decision-making and through their cash flow problems (Assaf and Al-Hejji 2006).

Consultants Related: Consultants can influence time performance of any project in the following ways: through inadequate schedule control by architects, through inability of owners to review design in a timely manner, through late incorporation of emerging technologies into a design, through ineffective coordination and/or inclusion of project user groups (Kumaraswamy,1999).

Contractor Related Factors: Contractors can influence time performance of any project in the following ways: through their financial difficulties, material management problems, planning and scheduling problems, inadequate site inspection, equipment management problems, shortage of manpower, poor site management and through unforeseen ground conditions (Jha, 2004).

Extraneous Factors: External such as; adverse weather, acts of nature, labour disputes and strikes have also been found to influence the time performance of contractors (Olomolaiye, 1997).

3.3 Determinants of quality performance

Quality in its simplest form is defined as meeting the customer's expectations or rather, the compliance with customer's specification thus for a user, quality is nothing but satisfaction with the appearance; performance and reliability of the project for a given price range (Jha and Lyer, 2007).

The factors affecting quality performancehave been classified as either success or failure factors.
The success factors are as follows: project manager's competence, top management support, monitoring and feedback by project participants, interaction among project participants and owners' competence.

The failure factors are as follows: conflict among project participants, hostile socio economic and climatic condition, project participants' ignorance and lack of knowledge, faulty project conceptualization, project specific factors and aggressive competition during tendering(Hatush and Skitmore, 1997).

3.4 Determinants for labour productivity

Labour productivity is simply defined as the amount of goods and services that a labourer produces in a given amount of time (Al-saleh, 1995). It plays a key role in determining the success of a project. However, in most construction projects, labour productivity has been low (Mahamid, 2013). This problem of low productivity has therefore led to many studies on factors influencing the construction labour productivity with an aim of pointing out those factors and consequently coming up with ways of improving it. For instance, Alinaitwe et al. (2007) found out that incompetent supervisors, lack of skills from the workers, rework, lack of tools and equipment, poor construction methods, poor communication, inaccurate drawings, stoppages because of works being rejected by consultants, insecurity, tools and equipment breakdown and harsh weather conditions as some of the factors affecting

labour productivity. Kaming et al. (1997) found out that the factors affecting labour productivity are: lack of materials, rework, work interference, absenteeism; lack of equipment and tools last but not least, Lim et al. (1995) found out that the top affecting factors are: difficulty with recruitment of supervisors, difficulty with recruitment of workers, high rate of labor turnover, absenteeism from the work site; and communication problems with foreign workers.

3.5 Factors affecting clients satisfaction

Clients' satisfaction is an important factor in the development of the construction process (Yasamis et al, 2002). Studies have been conducted to find out the various factors that lead to client satisfaction. For instance, Soetanto, et al, (2001) in their study on achieving quality construction projects, gaveeight factors that lead to client satisfaction. These eight factors are; adherence to budget, adherence to schedule, quality of construction workmanship, good site management, good resource management, effective communication, proper understanding and achievement of the client's brief and cooperation with the client.

3.6 Determinants for profitability

Profitability could be described as the trade-off between winning a tender and making a reasonable profit. According to Akintola and Skitmore (1990) profitability in the construction industry is generally rather low compared with other industries. Studies conducted to find out the factors influencing profitability reveal the following factors as the factors influencing the profitability of construction projects: capital structure, liquidity, firm size and the economic cycle.

3.7 Determinants for project participants satisfaction

Participants' satisfaction has been promoted to be an important measure in the last decade (Cheung *et al.*, 2000). Key participants in a typical construction project include: client, design team leader and construction team leader. Their level of satisfaction can be taken as an indicator of project success (Chan, 2001). However, there are a number of factors that influence on their level of satisfaction. These factors according to Mei-Yung (2010) are: the management mechanisms throughout the construction project, communication, requirements' specificity, co-operation, conflict amongst project participants, goal specificity, goal commitment and previous experience and performance of project participants.

3.8 Determinants for community satisfaction

Community satisfaction is the act of pleasure, gratification of desire; contentment in possession and delight; repose of mind resulting from compliance with its desires or demands (Sarawuth, 2010). It is an important performance indicator which according to various studies it is influenced by the following factors: cost of living, economy, education, environment, government and safety.

3.9 Determinants for sustainability of the development

The practice of sustainability in construction is paramount to the preservation of the built environment. In the construction industry it depends on the decisions taken by a number of actors in the construction process: owners, managers, designers, firms, governments and so on (Abisuga, 2014). It

also depends on the awareness, knowledge as well as an understanding of the consequences of individual actions (Abidin, 2010). However, the development and implementation of sustainable construction is still lagging behind in most nations (Abisuga, 2014). Anderson et al, (2000) explains some of the factors militating against sustainability as follows: the real or perceived financial cost and risks, the lack of information and training of designers, contractors, and clients, lack of demand from the clients, lack of support from subcontractors, regulation, local authority's and government's involvement, public interest and buyers demand, status quo in rules and regulations, availability of green materials, learning period, associating sustainable concept with luxury living.

3.10 Determinants for health and safety performance

Health and safety performance is another very important project performance indicator. This is because, the construction industry is considered one of the most hazardous industries throughout the world and accidents and injuries encountered in construction sites can bring great losses to individuals, organizations and societies (Heshman et al, 2007).

Generally, several international studies on the factors affecting safety performance in construction companies have been done. Matila, et al, (1994) for example, identified the connections between good construction site management practice and safety. In a research carried out by Jannadi (1995) on the impact of human relations on the safety of construction workers, it was found out that an effective use of human relations would improve safety programs and make safe behaviour a habit for workers. It was also found that, safety performance of each worker was very much related to his attitude towards his fellow employees, foreman, and employer, competition among workers, fatigue, and working under pressure had a tremendous impact on safety and that workers who worked against deadlines which were almost impossible to meet, competed with other crew members, and worked overtime had more injuries.

3.11 Determinants for communication performance

Effective communication among construction participants is important though the diversity in the composition of construction teams increases the communication complexity (Yan, 2006).This has triggered various researchers to study and find out the various factors influencing communication in the construction industry. For instance, Shen et al., (2006) in their study 'identification of factors influencing communication between participants in construction projects' identified thirty-four factors. As a summary, they found out that the top ranked factors affecting communication between constructions participants include: the complexity of the project, the communication schedule and construction timescale, the number of participating companies, contribution of project manager, good spirit and trust between the parties.

3.12 Determinants for the contractor's environmental performance

The factors affecting contractor's environmental performance can be linked to their role to environmental

protection. The participation of a contractor among other construction professionals in implementing environmental management in the implementation of a construction project is committed by performing the following three functions: complying with the regulations set by environmental authorities; implementation of environmental protection measures designated in project designs and specifications and environmental protection initiatives by contractors (Hua, et al, 2003).

3.13 Determinants for the functionality of the development

Functionality is defined as the totality of features required by a project or service to satisfy a given specification, need or fitness for purpose (Ali, *et al.,* 2010). It is the project guarantee that convinces both the client and the end-users that the specifications were adhered to during construction (Doloi, *et al.,* 2012).

Sambasivan and Yau (2007) found out that the functionality of any development is influenced by the selection of the right plant and equipment, mistakes in setting out of works at initial construction stage, inadequate contractor experience, and frequent failure of construction plant and equipment. A similar finding by Memon, *et al,.* (2011) supported the previous findings that contractor inexperience and inadequate experience of labour are the major factors contributing to poor functionality of construction projects in developing countries. Skill and technical competence of contractor's workforce, contractor's ability to identify and mitigate technical and schedule/programme risks, contractor's compliance with technical requirements are the major factors identified as having negative influence on the functionality of projects in Iran and Ghana (Jafari, 2013; Frimpong, *et al.,* 2003).

IV. RESEARCH METHODOLOGY

A cross sectional design was adopted. This entailed the use of structured questionnaires with both closed and open ended questions to collect both quantitative and qualitative data from the contractors of categories NCA1, NCA 2 and NCA 3. A sample size of 80 contractors was selected through both stratified random sampling as well as through the systematic random sampling techniques. Out of the 80 questionnaires sent to the respondents, 56 were returned representing a 70% response rate. A five point likert scale (1-very little, 2-little, 3-neutral, 4-much, 5-very much) was used to measure the variables. Data collected was analysed through descriptive statistics and through ranking of factors. The following formula was used to compute the Relative Importance Index (RII) used to rank the factors influencing the performance of contractors.

$$RII = \frac{\Sigma W}{A \times N}$$

Where:

W is the weight given to each factor by the respondents and ranges from 1 to 5

A = the highest weight = 5

N = the total number of factors

V. ANALYSIS AND RESULTS

5.1 Respondents response rate and profile

Out of the 80 questionnaires distributed, 56 were returned. This constituted a 70% response rate (see table 1 below).

Table 1-Response Rate

Respondents	Questionnaires Distributed	Questionnaires Returned	% of Response
NCA 1	26	15	19
NCA 2	22	20	25
NCA 3	32	21	26
TOTAL	80	56	70%

A majority of the respondents' years of experience was more than fifteen years as shown in the table 2 below.

Table 2-Respondents Years of Experience

Years of Experience of respondents	Frequency	%	Valid %	Cumulative Percent
0-5years	12	21.4	21.4	21.4
6-10years	15	26.8	26.8	48.2
11-15years	12	21.4	21.4	69.6
More than 15 years	17	30.4	30.4	100.0
Total	56	100.0	100.0	

5.2 Results and discussion on factors influencing performance of contractors in Kenya

The ranking of the factors was done per the cluster using the relative importance index (RII). An RII above 0.600 was considered to be of great influence to the performance of contractors. The results and discussion on the factors were as follows:

5.2.1 Financial factors

Table 3-The Relative Importance Index (RII) and ranking of financial related factors

S.No.	Financial factors	RII	Rank
1	Financial difficulties faced by the contractor	0.8036	3
2	Delays in payments to subcontractors by the contractor	0.7214	5
3	Delays in settling of claims by the clients	0.825	2
4	Delays in progress payments by the clients	0.8286	1
5	Financial constraints faced by the clients	0.7964	4
6	Inaccurate financial provisions by the clients	0.6929	6

The table above reveals that delays in progress payments by the clients (RII=0.829) is the greatest financial factor influencing on the performance of contractors in Kenya. This is followed by delays in settling of claims by clients (RII=0.825) and the financial difficulties faced by the contractor. On average, the financial factors scored an average RII=0.778. This is quite a high RII meaning that financial factors influence the performance of contractors in Kenya greatly.

5.2.2 Construction management factors

Table 4-The relative importance index and ranking of construction management factors

SNo.	Construction management factors	RII	Rank
1	Poor communication and coordination with other parties	0.5429	18
2	Ineffective planning and scheduling	0.5643	14
3	Poor site management and supervision	0.6036	12
4	Rework due to errors during construction	0.5536	17
5	Inaccurate cost estimates by the contractors	0.5571	16
6	Inadequate experience of the firm on such projects	0.6071	11
7	Fraudulent practices	0.4643	19
8	Site Conflicts	0.4464	20
9	Not holding regular site meetings	0.7821	1
10	Not holding regular safety inspections on site	0.7429	3
11	Safety regulation enforcement	0.7143	5
12	Having monetary/nonmonetary incentives to workers who perform well	0.5607	15
13	Disciplinary action to workers who violate safety regulations	0.6357	10
14	Formulation of safety policies	0.7179	4
15	Conducting safety training and education to workers	0.6786	6
16	Implementation of environmental protection measures designated in project design	0.6464	7
17	Working overtime	0.6393	9
18	Lack of commitment to continuous improvement	0.7679	2
19	Delays in mobilization	0.6429	8
20	Ineffective quality control	0.5679	13

The relative importance index of construction management factors shown in the table 4 above indicate that not holding regular site meetings (RII=0.7821) as being one of the greatest factors influencing the performance of contractors. This is closely followed by lack of commitment to continuous improvement (RII=0.7679) and not holding regular safety inspections on site (RII=0.7429). On average, the construction management factors scored an RII=0.6218. This RII is above the threshold of 0.600 therefore, it is evident that construction management factors greatly influence on the performance of contractors in Kenya.

5.2.3 .Construction technology factors

Table 5-The relative importance index and ranking of construction technology factors

SNo.	Construction technology factors	RII	Rank
1	Improper construction techniques implemented by the contractors	0.5143	5
2	Use of obsolete technology by the contractors	0.5821	1
3	Shortage of equipment	0.5571	2
4	Failure of the equipment	0.5464	3
5	Lack of skilled equipment operators	0.4607	6
6	Low productivity and inefficiency of equipment	0.5393	4

The construction industry in Kenya is still to traditional in that, it still uses the traditional construction techniques as well as that the rate of adopting new technology is low. This is evidenced in the table 5 above which shows a high ranking on the use of obsolete technology (RII=0.5821). This is followed by shortage and failure of equipment (RII=0.5571 and 0.5464) respectively. On average, the construction technology factors scored an RII=0.5333. This RII falls below the threshold set in this research and that it can be said that, construction technology factors do not influence on the performance of contractors greatly.

5.2.4 Design factors

Table 6-The relative importance index and ranking of design factors

SNo.	Design factors	RII	Rank
1	Too many change orders/ variations by the client and consultants	0.7643	1
2	Mistakes and discrepancies in design documents	0.6214	5
3	Delays in producing design documents	0.6286	3
4	Unclear and inadequate details drawings	0.5964	6
5	Complexity of project design	0.625	4
6	Insufficient data collection and survey before design	0.4857	8
7	Misunderstanding of owner requirements by architect and design engineers	0.5107	7
8	Delays in drawings approval	0.6607	2

Too many variation orders by the clients and consultants (RII=0.7643) were found to be the design related factors influencing the performance of contractors in Kenya. This was followed closely with delays in drawings approvals (RII=0.6607) and delays in producing the design documents (RII=0.6286). On average, the design related factors scored an RII=0.6116. This RII according to the threshold set in this research reveals that design related factors influence the performance of contractors in Kenya greatly.

5.2.5 Project management factors

Table 7-The relative importance index and ranking of project management factors

SNo.	Project management factors	RII	Rank
1	Project procurement method used	0.6464	4
2	Poor monitoring and feedback by the project manager /consultants	0.575	9
3	Project manager's technical capability/experience	0.7107	2
4	Planning and scheduling deficiencies by the consultants /project manager	0.6286	6
5	Inadequate consultants experience	0.5107	13
6	Conflicts amongst the consultants	0.4571	15
7	Lateness in reviewing and approving of design documents by the consultants	0.5821	8
8	Poor coordination and communication between consultants and other project participants	0.55	10
9	Delays in approving major changes in the scope of work by consultants	0.65	3
10	Delays in inspection of works by consultants	0.6	7
11	Slowness in decision making by client and consultants	0.7321	1
12	Delays by the client in delivering the site to the contractor	0.5214	12
13	Delays in approving the shop drawings and sample materials	0.5464	11
14	Suspension of work by the client	0.4857	14
15	Excessive bureaucracy	0.6429	5

The top three project management factors influencing on the performance of contractors were found to be; slowness in decision making by the clients and consultants (RII=0.7321), project manager's experience (RII=0.7107) and delays in approving major changes by the consultants (RII=0.6500). On average, project management factors scored RII=0.5893). This RII is below the threshold set in the research therefore, project management factors do not negatively influence the performance of contractors in Kenya greatly. This is because project management in the country is embraced and is practiced. It also implies that project management is yet to be embraced in a more structured form. The answers could therefore indicate a lack of experience in this area.

5.2.6 Materials factors

Table 8-The relative importance index and ranking of materials related factors

SNo.	Materials factors	RII	Rank
1	Changes in materialsspecification during construction	0.5571	6
2	Delays in materials delivery	0.6393	4
3	Damage of stored materials	0.425	7
4	Delays in manufacturing of special building materials	0.5821	5
5	Late procurement of materials	0.675	2
6	Slowness in decision making on materials to be used	0.6679	3
7	Materials price fluctuation	0.7214	1
8	Use of substandard materials by the contractors	0.4071	8

The top three materials related factors influencing on the contractors performance was found out to be: materials price fluctuation (RII=0.7214), late procurement of materials (RII=0.6750) and slowness in decision making on materials to be used (RII=0.6679). On average, the materials related factors scored RII=0.5844. This indicated that materials related factors do not negatively influence the performance of contractors greatly.

5.2.7 Labour factors

Table 9-The relative importance index and ranking of labour related factors

S/No.	Labour factors	RII	Rank
1	Size of the labour force	0.7250	1
2	Employees attitude	0.6679	3
3	Employees motivation	0.7214	2
4	Shortage of manpower	0.5893	5
5	Unqualified work force	0.5071	6
6	Low level of productivity by labourers	0.6179	4
7	Personal conflicts amongst the labourers	0.4643	7

The size of labour (RII=0.7250) was found to be having the greatest impact on the performance of contractors. This was closely followed by the employee motivation (RII=0.7214) and employees attitude (RII=06679). The average relative importance index was found out to be (RII=06133).This RII is on the upper limit meaning that, the labour factors have a

considerable influence on the performance of contractors in Kenya.

5.2.8 External factors

Table 10-The relative importance index and ranking of external factors

S/No.	Factors	RII	Rank
1	Adverse weather conditions	0.6500	2
2	Unavailability of utilities such as water, electricity, telephone etc.	0.4286	6
3	Effect of social and cultural factors	0.4643	5
4	Unforeseen ground conditions	0.6286	3
5	Changes in government regulations and laws	0.4786	4
6	Delays in providing services for utilities	0.6929	1

From the table 10 above, it is clear that delays in providing services for utilities such as water, electricity (RII=0.6929) had the greatest negative impact to the contractors performance. This was followed by adverse weather conditions (RII=0.6500) and then the unforeseen ground conditions (RII=0.6286). The average relative importance index for the external factors was found out to be (RII=0.5572). From this RII, it can be concluded that external factors do not have a very major negative influence to the performance of contractors in Kenya.

The analysis can be reduced to a general linear formulation as follows:

$$Cp = \sum_{i}^{n}(X1fi + X2Ci + X3ti + X4di + X5pi + X6mi + X7li + X8ri + e)$$

Where,

Cp-Contractor performance
X1-X8 are the generated coefficients through RII methodology in the analysis
f_i-financial factors
c_i-construction management factors
t_i-construction technology factors
d_i-design factors
p_i-project management factors
m_i-materials factors
l_i-labour factors
r_i-external factors
e-error

Substituting for the coefficients given:-

$$Cp = \sum_{i}^{n}(0.78fi + X0.62ci + 0.53ti + 0.61di + 0.59pi + 0.58mi + 0.61li + 0.56ri + e)$$

VI. CONCLUSION

This study sought to find out the degree of influence of the factors influencing the performance of local contractors in Kenya. From the literature review, seventy six factors that influence the performance of contractors were obtained. These factors were then clustered into eight sub-groups namely; financial factors, construction management factors, project management factors, construction technology factors, labour factors, materials factors, design factors and external factors. The factors with a high RII were those factors with more sub-factors that influence the contractors' performance negatively whereas the factors with a lower RII were those factors with more sub-factors that influence the contractors' performance positively.

From the analysis, the following conclusions were made: Financial related factors (RII=0.7780) have a high degree of negative influence on the performance of contractors This is then followed by: construction management factors (RII=0.6218); labour factors (RII=0.6133) and then design factors (RII=0.6116). Construction technology factors (RII=0.5333) was found to have less negative influence on the performance of contractors in Kenya. This was followed by external factors (RII=0.5571); materials factors (RII=0.5844) and lastly Project management factors(RII=0.5893).

This study therefore recommends that contractors in Kenya need to work on the financial, construction management labour and design factors since that is where they fail most according to the study.

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