



# Factors Behind Deficient Participation of Local Civil Works Contractors in Carrying Out Bituminous Road Works in Tanzania

Amon Raphael Makenya<sup>1\*</sup>, Yusuph Bakari Mhando<sup>2</sup>

<sup>1</sup>Department of Construction Management,  
Ardhi University, Dar es Salaam, TANZANIA

<sup>2</sup>Department of Civil Engineering,  
Arusha Technical College, Arusha, TANZANIA

\*Corresponding Author

DOI: <https://doi.org/10.30880/ijscet.2021.12.04.001>

Received 01 January 2020; Accepted 20 December 2021; Available online 29 December 2021

**Abstract:** Despite the huge investment made by Tanzania government in the road sector development, the participation of local civil works contractors in developing road infrastructure is not satisfactory and is reported to be less by value of the total works undertaken annually in the country. The extent to which local contractors participate in the development of road infrastructure in Tanzania leaves many questions behind, and the factors of their deficient participation are not well established. The objective of this study is to identify the significant factors of deficient participation of local civil works contractors in carrying out bituminous road works in Tanzania and suggest the appropriate means to improve their participation. The methodology used in this study includes critical review of literature, road project reports from Tanroads and discussions with road sector stakeholders. Results from forty four (44) randomly selected bituminous trunk road projects awarded by Tanroads between 2003 and 2012 shows that, only 16 % of all bituminous road projects were awarded to local civil works contractors and the remaining 84% were awarded to foreign contractors. Moreover, participation of local civil works contractors is less by 10% by value of the total works undertaken annually in the country. Further, the study revealed that, inadequate participation of local civil works contractors is predominantly associated with problems such as inadequate capital, low financial capacity, inadequate work opportunities, lack of appropriate construction equipment and plant, lack of skilled personnel and inadequate management skills. However, collective efforts by government and other construction industry stakeholders are needed to increase effective participation of local contractors in the development of road infrastructure in the country. The authors hope that the findings from the current study will increase the stakeholders' awareness on the participation of local civil works contractors in executing bituminous road works in the country.

**Keywords:** Bituminous trunk roads, local civil works contractors, participation, tanroads, Tanzania

## 1. Introduction

Construction industry is a sector of the economy that transforms various resources into constructed economic and social infrastructure [1]. The direct benefits contributed by this industry to the Tanzania national economy includes contribution to the Gross Domestic Product (GDP) by about 5-10 percent, the Gross Fixed Capital Formation (GFCF) by more than 50%, and the amount of manpower employed by the industry is about 9% of the work force in Tanzania. Construction industry typically consumes 50-70 percent of public investment [2]. These three indicators; Gross Domestic Product

\*Corresponding author: [makenyaworld@yahoo](mailto:makenyaworld@yahoo).

(GDP), Gross Fixed Capital Formation (GFCF) and employment creation have been used to assess development of the construction industry due to their extended acceptance. It is further noted that, after agriculture, the construction industry is a major employer of the country's labour force [3]. Despite significant performance of the construction industry, the basic physical infrastructure to support Tanzania economic growth remains inadequate, inefficient and unreliable [1]. Thus, the construction industry has a role in supporting economic growth, further development and sustenance of physical infrastructure of the country. Therefore, it is agreed that construction industry development is a deliberate process to improve its capacity and effectiveness in order to meet the demand for building and civil engineering products and to support sustained national economic and social development objectives [4].

Certainly, the growth of local construction industry in Tanzania largely depends on active participation of local contractors in the industry. Despite the fact that recently there has been significant improvement in the performance of local contractors, a lot remains to be done in order to reach a sustainable contracting capacity that will enable contractors to participate competitively and effectively in undertaking construction works, particularly bituminous road works in the road sector. The segment of bituminous road works in the Tanzania road sector is an area of interest, because it consumes huge amount of money in the development process, and if mishandled it can cause detrimental effect to the economy of the country. However, the extent to which local contractors participate in the development of bituminous road works remains questionable, and the factors behind the situation have not been well studied. Based on the problems and facts stated above, the objective of this study is to identify the significant factors of deficient participation of local civil works contractors in carrying out bituminous road works in Tanzania and suggest the appropriate means to improve their participation. The methodology used in the study is a critical review and syntheses of literature, road project reports from Tanroads and discussions with road sector stakeholders. The study is organised as follows: section 2 represents methods used for the research; section 3 discusses literature review; section 4 presents results and discussion; section 5 concludes and recommend for improvement; section 6 presents acknowledgement and section 7 represents the list of literature reviewed.

## **2. Methodology**

The study is based mainly on the critical review and synthesizes of the relevant literature. Literature review being the secondary source of data collection, the research was conducted citing various documents that could provide the information pertinent to this study to get the data required. The documents such as books, journals, previous research, seminar/workshop reports, annual and monthly reports, circulars, policies, publications and manual for operation were reviewed and synthesized together with other relevant documents that gave response to the study objectives.

## **3. Literature Review**

### **3.1 Characteristics of Construction Industry**

The construction industry in Tanzania is characterised by small and medium sized contractors. Even the so-called large contractors when compared with other countries (developed and developing) they are still small contractors [5]. In 2007 the market share by value for local contractors was 30%, while the foreign contractors enjoying 70%. However, the local contractors account for about 94% of the total contractors registered in the country. This trend does not create conducive environment for the development of local contractors and contracting capacity [6]. Then the current characteristics of the construction industry in the country can be presented as an "Inverted Pyramid". The challenge is how to create a sustainable national contracting capacity for such a large number of small contractors realizing small share in terms of monetary value, while few but 'large' foreign contractors dominate the industry in terms of monetary value [6].

### **3.2 Input of Construction Industry to the National Economy**

The importance of the construction industry to the national economy is well recognized in so many relevant policy documents, for example, Tanzania development vision 2025, National Strategy for Growth and Reduction of Poverty (NSGRP) 2005-2010 and the Construction Industry Policy (CIP) 2003. To date the construction industry contributes substantially to the national economy, mainly through contractors. For the past few years, it was growing at the rate of 11% (average) with a contribution of about 5.8 % to the GDP and 55-65% to the capital formation respectively. Also it employs about 9% of the workforce in Tanzania. The industry therefore has a strong operational base and business presence in the local economy. Additional benefits contributed by the construction sector in Tanzania and worldwide can be summarised as follows: creates employment directly or indirectly by a 'multiplier effect'; Protects the environment in its day to day activities; improves infrastructure which leads to growth of economy and reduction of poverty; improves living conditions of all citizens in Tanzania, and finally enhances the training of road sector practitioners. Therefore, to enhance the contribution of the sector to social economic development of the nation, deliberate efforts to develop the local contractors and construction industry capacity have to be a joint effort by all the construction industry stakeholders. The efforts may include working out for strategies to overcome the challenges facing emerging construction enterprises such as, inadequate of finance and access to financial support [7].

### 3.4 The Tanzania Road Sector

The Tanzania road sector is a major contributor in socio-economic development in the country. It accelerates economic growth and hence contributes towards achieving the targets of National Strategy for Growth and Reduction of Poverty in alleviating poverty. The sector contributes 5% to the overall Gross Domestic Product (GDP), handling about 70% of internal freight traffic and 60% of transit cargo. The National Transport Policy of 2003, the Construction Industry Policy of 2003 and the Rural Development Policy of 2003 all acknowledge the importance of the roads network as being essential for promoting socio-economic development [8]. The sector involves basic activities related to maintenance, upgrading and rehabilitation of trunk, regional, district, urban and feeder roads, and their river crossing structures such as bridges and culverts. Since independence in 1961, development and maintenance of roads has been the responsibility of the Government. The government has participated directly in the planning, designing, and mobilisation of funds and in the execution of road works. Private sector participation has been minimal especially in construction and maintenance except in service provision as contractors and consultants [8]. However, to date the private sector participation in the Tanzania road sector is convincing and increasing.

### 3.5 Significance of the Road Sector in Tanzania

Transport and the opening up of rural areas is a priority under the growth and reduction of income poverty cluster of Tanzania's National Strategy for Growth and Reduction of Poverty (NSGRP, popularly known as "MKUKUTA"). The NSGRP gives particular emphasis to increasing accessibility to economic and social services in rural areas where both the major poverty is found and where there is considerable potential for development primarily in agriculture. Tanzania is a large country of nearly 1 million square kilometres, over 20 times the size of Denmark. The majority, 87% of its approximated 45 million people live in the rural areas. The population tends to be concentrated around the periphery of the country with relatively sparsely populated areas in the centre. A consequence of this distribution of population is that rural areas are dependent upon an extensive roads network, which totals approximately 85,000 kilometres, for access to markets and services [9].

The importance of roads to an economy is usually looked at in terms of three main aspects: accessibility they provide in reaching with ease areas offering economic opportunities, productivity growth argument (productivity effect and factor adjustment effect), and the welfare effect referring to access to social amenities [10]. The contribution of the road transport sector is also seen in its contribution to GDP, employment, capital formation, provision of intermediate inputs to all the other sectors of the economy, and poverty reduction in the sense that its presence unlocks areas offering economic opportunities (accessibility argument) [11]. This places the road transport in a strategic position in the economy of any country including Tanzania.

### 3.6 Development of the Road Sector in Tanzania

Reforms in the road sector started early 1990s by the Government adopting reforms in the management of the economy. Most of these reforms were institutional which were initiated under the Road Management Initiative (RMI). The main focus was to create an efficient service delivery mechanism. MoID initiatives to implement such reforms included establishing the Roads Fund (RF) and later the Roads Fund Board (RFB) for the purpose of managing the fund. Moreover, Tanzania Roads Agency (TANROADS) was established to manage the Trunk and Regional Road networks [8].

In order to cope with the above changes, MoID reviewed the Highways Ordinance Cap. 167 of 1932 which was last amended in 1969 and are expected to come up with a new Roads Act. The original Act as amended by Amendment Act No. 40 of 1969 did not allow for the financing and management of road works and thus making it difficult to identify adequate resources. The Act was aiming at reviewing and repealing the Highways Ordinance Cap 167 with the subsequent amendment of 1969. The new Act recognises the Roads Tolls (Amendment) (No. 2) Act of 1998 that established the RFB, the Executive Agencies Act 1997 that established TANROADS and its Ministerial Advisory Board, and the regional roads boards at regional level [8].

In 2009, the construction sector was growing at a rate of 10.5% compared to 7.5% in 2008. This was driven by the construction of roads and bridges, residential and non-residential buildings and land developments. The sector's contribution to the national GDP in 2009 was 7.9% compared to 7.7% in 2008. By recognising the importance of infrastructure for economic growth, the Government has continued to place considerable focus on infrastructure development in the upcoming years. For instance, as part of this commitment, the Government was able to allocate 13% of the financial year 2010/2011 expenditure budget to infrastructure [12].

### 3.7 Tanzania National Roads Agency

Tanzania National Roads Agency (TANROADS) was established by the Executive Agencies Act of 1997 and became operational from financial year 2000/2001. Tanroads is responsible for the management of the primary road network of

about 35,000km comprised of trunk and regional roads. The Agency is also responsible for the management of subsidiary businesses which are the equipment pools, equipment hire units and materials laboratories. Tanroads organisation structure was reviewed in 2003 and a new structure approved and implemented from January 2004 [8]. It has 21 regional offices in mainland Tanzania. The regions are grouped into four zones namely coastal, central, lake and southern highlands. Tanroads enters into two performance agreements each financial year. One agreement is with the RFB for the provision of road maintenance and the other with MoID for implementation of development of road projects financed by the Government and development partners [8].

### 3.8 Regional Administration and Local Government

Prime Minister's Office, Regional Administration and Local Government (PMORALG) through its 121 Local Government Authorities (LGAs) oversee the management of about 50,000 kilometres road networks. These fifty kilometres of road networks comprise 20,000 kilometres of district roads, 2,450 kilometres of urban roads and 27,550 kilometres for feeder roads. PMORALG has not carried out reforms in the roads sector as it has MoID because of its decentralisation policy. Thus, the local government reforms in PMORALG have not been felt by the roads sector. PMORALG has a unit called the Roads Fund Management Unit (RFMU) under the Directorate of Regional Coordination (DRC) that oversees matters related to roads funds. The disbursement formula to the LGAs was reviewed to replace the one that disburses 85% on equity basis which has been proven to be unsuitable [8].

### 3.9 Classification of Tanzania Road Networks

Tanzania has road network of about 85,000 kilometres with an estimated road asset value of the United State Dollars (USD) 1.64 billion [13]. The Roads Toll Act (Amendment No. 2) 1998 defines "classified roads" as any public road including trunk, regional, urban and feeder roads. Table 1 demonstrates road networks classification in five categories as recommended in the reviewed Highway Ordinance Cap 167 of 1932.

**Table 1 - Classification of Tanzania road networks**

Road Category	Paved (km)	Unpaved (km)	Total (km)
Trunk roads	3,830	6,470	10,300
Regional roads	100	24,600	24,700
District roads	30	19,970	20,000
Urban roads	470	1,980	2,450
Feeder roads	0	27,550	27,550
<b>TOTAL</b>	<b>4,430</b>	<b>80,570</b>	<b>85,000</b>

Source: (Tanroads, 2004)

### 3.10 Tanroads - The Experience and Observation

Since its establishment in 2001, Tanroads have been implementing road maintenance and development programmes by engaging local and international contractors. All maintenance works in the past years were executed by engaging local contractors while participation in development works varied with the share for local being less than 10% in terms of value of the development works. However, the Tanzania construction industry is yet developed to effectively compete in the National and the Regional market [15].

The engagement of local contractors in maintenance by Tanroads can be demonstrated by the number of contracts awarded in a year. The number of awarded contracts has been decreasing over the years from 1704 contracts in financial year 2001/2002 to 898 contracts in financial year 2006/2007 while in monetary terms the contracts total value increased from Tanzania Shillings (TShs) 31 billion to TShs 48 billion in the same period. This has been a deliberate policy by Tanroads of procuring big size but few contracts so as to overcome the burden of procuring and supervising numerous small contracts [15].

### 3.11 Involvement of Foreign Firms in the Construction Industry

The involvement of international construction firms (contractors, consultants) in the Tanzania construction industry cannot be over-emphasized. One of the arguments for the involvement of international companies in the development of Tanzania's infrastructure is that such companies can bring skills and knowledge that can assist in the development of the country. Unfortunately, the reality is often different. A number of international companies have scaled back or withdrawn from involvement in sub-Saharan Africa because of corruption.

On the other hand, as Ofori [4] argues, frequently, there is a suspicion that some international companies are not prepared to support and advice on the opportunities offered by the weak structures and low levels of enforcement of regulations in Sub-Saharan Africa, which are generally perceived to contain elements of corruption. This is somehow a sad remark that, the international companies can also to some extent and indirectly, be taken to be part of the problem, rather than being part of solution.

### 3.12 Participation of Local Contractors in the Construction Industry

The active participation of local contractors in the construction industry is subjected to their performance. The performance of contractors can be looked at through the following aspects: Quality of services and products achieved by contractors; Level of productivity; Acquisition of new technology; Management of key resources, such as human, finance, materials and equipment; Time management and; Compliance with regulations and legislations. However, the level of participation of local contractors in terms of the number and size of job undertaken is too low to positively achieve the above enumerated aspects for measuring contractors' performance [16].

Thus, this state of affairs may be directly linked with sub-standard performance of works executed by most local contractors. The lack of work opportunities, in particular, leads local construction industry to be characterized by a vicious circle of poor performance. That is, a construction firm which does not get an opportunity to work misses an opportunity to improve its capability of producing quality work. Also, a non-performing firm diminishes its chance of winning new contracts in future. Consequently, obtaining a job and performing to the required quality are dependent and forms a continuous cycle [17].

Also, it has been observed that, most of Tanzanian contractors work in small jobs in comparison to their classes of registration. Taking into account that most of them secure between one (1) and three (3) jobs a year, their annual turnover is consequently very low [18]. However, the trend is that foreign contractors continue to lead in terms of earnings in civil engineering construction projects as illustrated in Table 2.

**Table 2 - Average size contracts for civil works contractors**

Class of Contractors	Category of Contractors	Civil Works Contractors Earning			
		Limit	Year 1999	Year 2000	Year 2001
I	Foreign	Unlimited	1855.8	1797.4	1004.4
	Local	Unlimited	221.4	282.9	212.1
II	Local	3,000	83.7	346.9	87.8
III	Local	1,000	49.4	127.1	213.6
IV	Local	500	52.4	73.1	175.5
V	Local	300	26.4	62.7	31.6
VI	Local	100	27.4	20.2	25.0
VII	Local	50	17.6	14.8	21.3

(Source: TACECA, 2003)

The average annual contracts size for class one local civil works contractors was 10.7% in 1999, 13.6% in 2000 and 17.4% in 2001 respectively, while the average annual contracts size for foreign contractors was 89.3% in 1999, 86.3% in 2000 and 82.6% in 2001 respectively. Thus, the trend in Table 2 demonstrates that foreign contractors undertake the bulk of the works as compared to local civil works contractors.

The average annual turnover for class one local civil works contractors was 10.2% in 1999, 33.5% in 2000 and 19.5% in 2001 respectively of the total civil works undertaken annually by both class one local and foreign civil works contractors. Likewise, the average annual turnover for foreign contractors was 89.8% in 1999, 66.5% in 2000 and 80.5% in 2001 respectively. Thus, as illustrated in Table 3, this trend shows that foreign contractors undertake the bulk of the work as compared to local civil works contractors.

**Table 3 - Average annual turnovers for civil works contractors**

Class of Contractors	Category of Contractors	Civil Works Contractors Turnovers		
		Year 1999	Year 2000	Year 2001
I	Foreign	8,428	3,277.7	4,132.8
	Local	961	1,654	1,003
II	Local	168	353	168
III	Local	83	115	183.4
IV	Local	79	166	167

V	Local	63	105	48
VI	Local	29	35	24
VII	Local	21	16	12

(Source: TACECA, 2003)

### 3.13 Strengths and Weakness of Local Civil Works Contractors

The strengths of local civil works contractors lie on the following: they can readily execute projects in any place within the country including the remote areas; they can easily mix with labourers socially on the account of having the same culture; although not always, normally pay labourers better wages when compared to some foreign contractors.

But on the other hand, their weakness lies in several factors that need to be identified, synthesized and discussed so as to understand them better for their effective mitigation. Through comprehensive literature review, this study therefore attempts to fill this gap by identifying the significant factors causing deficient participation of local civil works contractors in carrying out bituminous road works in Tanzania. According to [19] lack of exposure, erosion of capital and eventual loss of confidence has stifled the growth of the domestic contractors.

## 4. Results and Discussion

### 4.1 Participation of Local Civil Works Contractor in the Road Sector

In this study, participation of local contractors is meant to be participation of local contractors in terms of the number and size of jobs undertaken in the construction industry of Tanzania. Though the contractors register has more than 2000 contractors, with 97% being local contractors, foreign contractors continue to dominate the Tanzania construction industry [19]. The statistics show that foreign contractors constitute less than 3% of all registered contractors in the country but execute about 70% of large and medium-sized contracts [19]. It means the growth in the number of contractors has not translated into a proportionate growth in the percentage of works undertaken by local civil works contractors. The local construction industry thus continues to be hampered by poor capacity, low productivity, poor quality workmanship, and low profit margins for contractors [20].

The extract data from TANROADS covers trunk road projects in many regions of the country. From the extracted data, forty-four (44) trunk road projects awarded to civil works contractors between 2003 and 2012 have been selected for review. Figures 1 and 2 respectively demonstrate the review results whereby out of forty-four (44) trunk road projects, seven (7) was awarded to class one local civil works contractors with projects value of 207.896 billion, while the remaining thirty seven (37) is awarded to foreign contractors with projects value of 2,519.043 billion. Therefore, as the results indicate, still participation of local civil works contractors in bituminous road works in the trunk roads network is very low both in terms of the number and value of road projects undertaken despite the marginal noted improvements.

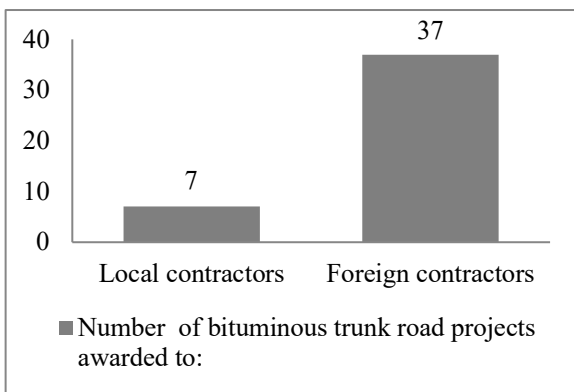


Fig. 1 - Trunk road projects 2003-2012

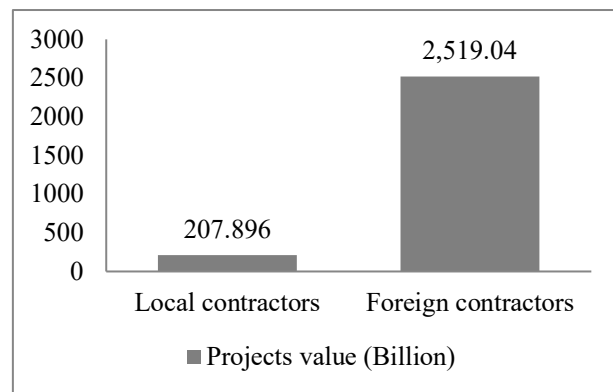


Fig. 2 - Trunk road projects value 2003-2012

According to [21] the participation of both local contractors and consultants in the road sector in terms of money value remains marginal as compared to total value of construction volume. Furthermore, despite of a big number of registered civil works contractors, the participation of local contractors in the road sector is too low as foreign contractors undertake the bulk of the work [17]. A study conducted by [16] revealed that participation of local civil works contractors is less than 10% by value of the total works undertaken annually in the country.

## 4.2 Factors Contributing to Deficient Participation of Local Civil Works Contractor

From the review, it is observed that the capacity of local civil works contractors is limited in terms of managerial and technical skills, financing of running contracts and ownership of necessary plant and equipment for the works. As a result, they take longer to complete awarded works or even desist from participating in specialized works like those for bitumen roads [15]. Table 4 shows the summary of the major challenging factors to local contractors that had been observed as barriers contributing to deficient participation and inadequate performance in bituminous road construction and maintenance projects.

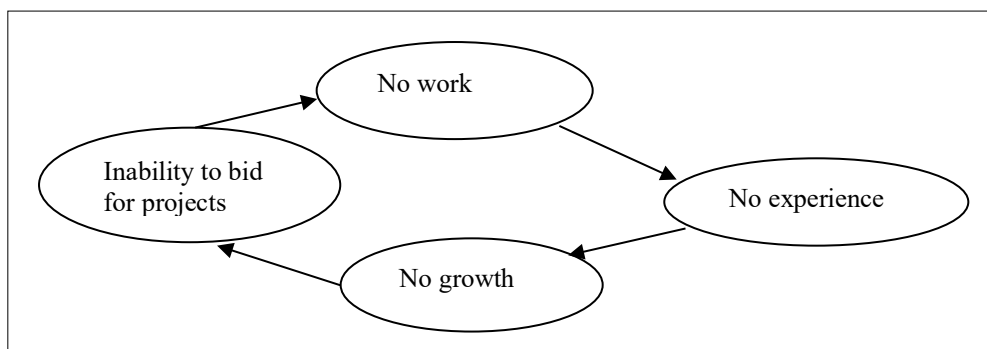
**Table 4 - Factors contributing to deficient to local civil works contractors**

Deficient factors	Deficient factors related problems
1 Inadequate Work opportunities	Stiff competition / few work opportunities Corruption, Favouritism, bureaucracy Proliferation of unregistered contractors
2 Skilled personnel	No ability to pay Lack of practical skills No reliability/ trustworthiness
3 Finance	Limited / small capital base Difficulty in assessing loans / credit facility Delays in payments from clients
4 Equipment	No ability to purchase High hire rates, Insufficient plant hire facilities Poor condition of hired equipment
5 Construction Materials	Low quality, High prices Frequent price fluctuations

(Source: Malongo, 2003)

## 4.3 Inadequate Work Opportunities

Work opportunities continue being a major problem amongst contractors due to a host of reasons. Proliferation of unregistered contractors, stiff competition, few work opportunities, corruption, favoritism, bureaucracy continues being problems contributing to reduction of work opportunities for local contractors [22]. The result is that it is difficult for such local contractors to build up their experiences and a financial base which is required for more complex works, and the viscous circle as depicted in Figure 3 develops.



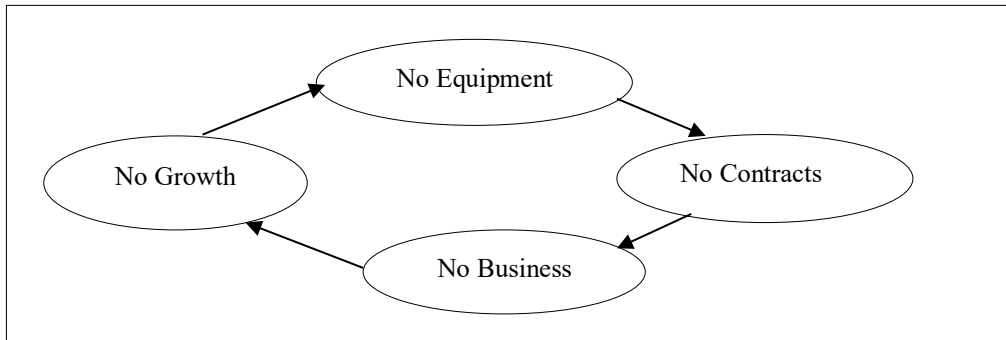
**Fig. 3 - Viscous cycle in the construction industry (Source: Bairi, 2005)**

## 4.4 Lack of Capital and Low Financial Capacity

The problem of weak capital base especially among local contractors of lower classes continues unabated. This is compounded by strict conditions imposed by financial institutions when applications for credits and loans are submitted [22]. Most of the contractors in the lower classes of registration lack adequate capital which would otherwise have enabled them go for large and lucrative works. Due to this factor, they are limited to small jobs which do not make them grow and aspire for higher classes of registration [23].

#### 4.5 Lack of Appropriate Construction Equipments and Materials

Lack of construction equipments and materials is another problem facing the local contractors. Since they do not have adequate capital, they cannot acquire substantial number of construction equipments and materials required for the job; hence the vicious circle happens as illustrated in Figure 4. Due to this fact, such contractors depend very much on hired equipment [23]. There is a cause and effect relationship with the finance problem in that the lack of construction equipments and materials is probably a consequence of most contractors having a weak financial base [22]. The scenario of construction equipments and plant not available for hire and if available high prices of acquiring such equipments do make majority of local contractors unable to complete their projects in time and sometimes in poor quality [7].



**Fig. 4 - Contractors vicious cycle (Source: Bairi, 2003)**

Contractors must break this vicious cycle or else they have to exit out of the construction business. In this case, the challenges is for contractors to acquire equipment of their own and those having equipment to practice proper maintenance and replacement systems (Bairi, 2003).

#### 4.6 Lack of Skilled Personnel and Management Skills

The ability to retain skilled personnel in the construction industry is still a problem especially for civil works contractors of whom 18.6% conceded of their inability to pay skilled personnel. This forces the construction industry to rely on personnel without the requisite practical experiences. The problem of lack of skills is particularly serious in the specialist contractors category where specialist skills are needed to perform the required tasks [22]. Also the problem of personnel with inadequate management skills is very similar to the one on lack of skilled personnel. Many of these local contractors do not have adequate personnel with required management skills who can assist them to ensure that all the necessary legal documents are in order. Parallel to this, it is also important to make sure that the jobs are executed in manner that will ensure conflicts with clients and the sites are well managed for the contractors to realize profit. There have been some cases in the LGAs where the contractor was not able even to fill the contract documents due to lack of such skills [23].

### 5. Conclusion

The aim of the study was to identify the various significant factors of deficient participation of local civil works contractors in carrying out bituminous road works in Tanzania, also to suggest the appropriate means to improve their participation. In view of this objective set forth in section 1 of this study report, the study results demonstrate that, the randomly selected road projects from TANROADS which has been awarded to both local and foreign class one civil works contractors between 2003 and 2012, only 16% of all the projects were awarded to local contractors with projects value of TShs 207.896 billion of which is 8% of the total projects value, while the remaining 84% of all the projects were awarded to foreign contractors with projects value of TShs 2,519.043 billion which is 92% of the total projects value. Further, the previous study conducted by TACECA revealed that participation of local civil works contractors is less than 10% by value of the total works undertaken annually in the country.

Finally, it can be concluded that, still participation of local civil works contractors in bituminous road works in the trunk roads network is very low both in terms of the number and value of road projects undertaken despite the slightly noted improvements. This scenario were mainly contributed by the identified significant deficient factors contributing to poor participation such as inadequate work opportunities, inadequate skilled personnel, financial difficulties and inability to acquire appropriate construction equipments and materials.

In view of the fact that local contractors have significant role to play in the development of Tanzania construction industry, it must be of concern that, the participation of local contractors in road sector is very low as compared to foreign contractors who undertake the bulk of the work as sighted in the findings of this study. The authors therefore recommend



that deliberate strategic actions to a large extent are appropriate to be taken to improve participation of local civil works contractors in undertaking bituminous road construction projects in the trunk roads network.

Conclusively, the authors hope that the findings from the current study will increase the awareness on the participation of local civil works contractors in executing bituminous road works in the country. Besides, the findings can be useful to stakeholders involved in the road sector development including the government, contractors, consultants, professionals, academicians, researchers and policy makers.

## Acknowledgement

The authors wish to sincerely acknowledge with thanks, the Tanzania National Roads Agency (TANROADS) for providing necessary documents used in this study. Furthermore, the authors wish to acknowledge with thanks, the Tanzania government agencies, institutions, the consultants, the contractors and individuals for providing comprehensive and important information, and genuine cooperation which resulted into the easier availability of the archive information needed for this research.

## References

- [1] K. M. I. M. Msita, "Regional and International Trading Regimes: Challenges of the Local Construction Industry and the Way Forward," Construction Industry Forum Paper, Diamond Jubilee Hall, Dar es Salaam, 2001.
- [2] N. M. Lema, and A. D. F. Price, "Analysis of the Tanzania Construction Industry Macro-Economic Performance Trends Over 25-Years Period, 1969-1993," Proceedings of the 1<sup>st</sup> Meeting of CIB Task Group 29 (TG 29) on Construction in Developing Countries, September, Arusha, Tanzania, 1998.
- [3] B. L. M. Mwamila, and A. O. Mkamba, "The Role of the Engineers Registration Board in the Development of the Construction Industry," Construction Industry Forum Paper, Diamond Jubilee Hall, Dar es salaam, Tanzania, 2001.
- [4] G. Ofori, "Challenges of Construction Industry in Developing Countries: Lessons from Various Countries," Proceedings of the 2<sup>nd</sup> international conference on construction in developing countries, 15-17 November, Gaborone, Botswana, 2000.
- [5] Contractors Association of Tanzania, "Contractors Perspective on the Role of CRB and Contractors in Regulation and Development of the Construction Industry," Proceedings of CRB Annual Consultative Meetings, CRB's Five Year Corporate Plan: Goals and Strategies, Dar es Salaam, 2003.
- [6] Contractors Association of Tanzania, "Contractors Financial Challenges and Solutions," Proceeding of CRB Consultative Meeting on Contractors' Financial Management Aspects, Seeking Collaborative Solution to Contractors Financial Challenges, 8<sup>th</sup>-9<sup>th</sup> May, Dar es Salaam, pp. 1-9, 2008.
- [7] M. Bairi, "Contractors Challenges in Tanzania: The Way Forward," Proceeding of CRB Annual Consultative Meetings on Contractors Challenges in Tanzania," CRB's Five Year Corporate Plan: Goals and Strategies, Dare s Salaam, pp. 94-105, 2003.
- [8] Ministry of Infrastructure Development, "Mkukuta Based Millennium Development Goals (MDGs) Costing for the Road Sub-Sector," Dar es Salaam, 2006.
- [9] Ministry of Finance and Administration, and Danish International Development Agency, "Road Sector Programme Support, Phase 3 (2006-2010)," Programme Document No.104, Tanzania, pp.815-300, 2005.
- [10] C. D. Creightney, "Transport and Economic Performance: A Survey of Developing Countries," World Bank Technical Paper No. 232, 1993.
- [11] S. B. Likwelile, "Roads as a Tool for Poverty Eradication: The Case of Rural Tanzania," In Proceedings of Annual Road Convention on Good Roads for the Next Century, Dar es Salaam, 1999.
- [12] Contractors Registration Board, "Newsletter: Budget 2010/2011 Synopsis," April-June, Dar es Salaam, ISSN 0856-7891, 2010.
- [13] Africon Engineering International, "Final Project Documentation: Consultancy Services for Management Support to the Roads Fund Board in Tanzania," Dar es Salaam, 2004.
- [14] Tanzania National Roads Agency, "Trunk Roads Network Report," Dar es salaam, Tanzania, 2004.
- [15] T. Mosso, and J. V. Lwiza, "Tanzania National Roads Agency Perspective on Contracting Industry and Future Challenges," Proceedings of CRB Annual Consultative Meeting, 10 years of CRB: Empowering Contractors to Meet the Challenges ahead, Dar es Salaam, 2007.
- [16] Tanzania Civil Engineers Contractors Association, "Performance of Civil Engineering Contractors: Contractors Perspective," Proceedings of CRB Annual Consultative Meetings, An Enabling Environment for the Development of a Vibrant, Efficient and Sustainable Construction Industry, 15-16 June, Dar es Salaam, pp. 22-25, 2006.
- [17] R. S. Mlinga, "Procurement Aspects in Creating an Enabling Environment for the Construction Industry," Proceedings of CRB Annual Consultative Meetings, An Enabling Environment for the Development of a Vibrant, Efficient and Sustainable Construction Industry, 15<sup>th</sup>-16<sup>th</sup> June, Dar es Salaam, pp. 78-85, 2006.

- [18] Tanzania Civil Engineers Contractors Association, "Contractors perspective on the role of CRB and contractors in regulation and development of the construction industry," Proceedings of CRB Annual Consultative Meetings, CRB's Five Year Corporate Plan: Goals and Strategies, Dar es Salaam, 2003.
- [19] S. Materu, "Towards Sustainable Local Contracting Capacity-CRB Approach," Proceedings of the 2<sup>nd</sup> International Conference of the CIB Task Group 29 (TG 29) on Construction in Developing Countries, 15-17 November, Gaborone, Botswana, pp. 316-327, 2000.
- [20] A. Urio, "Towards the Establishment of a Framework for Contractor Performance Measurement," Proceedings of CRB Annual Consultative meetings, CRB's Five Year Corporate Plan: Goals and Strategies, Dar es Salaam, pp. 10-24, 2003.
- [21] M. Bairi, "Capacity Building of the Local Construction Industry" Proceeding of CRB Annual Consultative Meetings on Capacity Building for a Sustainable Constructing Industry: a Challenge to All Stakeholders, Dar es Salaam, 2005.
- [22] J. K. Malongo, "Performance of Contractors during 2002," Proceedings of CRB Annual Consultative Meetings, CRB's Five Year Corporate Plan: Goals and Strategies, Dar es Salaam, pp. 26-37, 2003.
- [23] R. Musingi, "Challenges Facing the Contracting Industry: The Case and Experience of LGAs," *Proceedings of CRB Annual Consultative Meeting, 10 Years of CRB: Empowering Contractors to Meet the Challenges Ahead*, Dar es Salaam, 2007.