# Tender Systems and Processes within the Mauritian Construction Industry: Investigating the Predominance of International Firms and the Lack of Absorptive Capacity in Local Firms

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Abstract—Mauritius, a developing small-island-state, is facing a recession which is having a considerable economic impact particularly on its construction sector. Further, the presence of foreign entities, both as companies and workers, within this sector is creating a very competitive environment for local firms. This study investigates the key drivers that allow foreign firms to participate in this sector, in particular looking at the international and local tender processes, and the capacity of local industry to participate. This study also looks at how the current set up may hinder the latter's involvement. The methodology used included qualitative semi-structured interviews conducted with established foreign companies, local companies, and public bodies.

Study findings indicate: there is an adequate availability of professional skills and expertise within the Mauritian construction industry but a lack of skilled labour especially at the operative level; projects awarded to foreign firms are either due to their uniqueness and hence lack of local knowledge, or due to foreign firms having lower tender bids; tendering systems and processes are weak, including monitoring and enforcement, which encourages corruption and favouritism; a high lev el of ignorance of this sector's characteristics and opportunities exists amongst the local population; local entities are very profit oriented and have short term strategies that discourage long term investment in workforce training and development; but most importantly, stakeholders do not grasp the importance of encouraging youngsters to join this sector, they have no long term vision, and there is a lack of mutual involvement and collaboration between them.

Although local industry is highly competent, qualified and experienced, the tendering and procurement systems in Mauritius are not conducive enough to allow for effective strategic planning and an equitable allocation of projects during an economic downturn so that the broadest spread of stakeholders' benefit. It is of utmost importance that all sector and government entities collaborate to formulate strategies and reforms on tender processes and capacity building to ensure fairness and continuous growth of this sector in Mauritius.

**Keywords**—Construction industry, tender process, international firms, local capacity, Mauritius.

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#### I. INTRODUCTION

AURITIUS is classed as an African developing country Mand small-island-state (SIS) with its central location in the Indian Ocean making it a business, trading, manufacturing and fiscal hub connecting Africa and Asia [1]. Although, it has a bourgeoning business sector in a prosperous economic climate [1] and it has experienced a remarkable increase in all its construction activities over the past few years, the subsequent and recent recession curbed most of its infrastructural development. This is having an impact on local industry as, as reported by local news, local contractors are seeking more and more construction work in a gradually diminishing market [2], particularly since many foreign entities also undertake a lot of projects in this sector. This situation, consequently, is impeding the capacity development and growth of indigenous companies who, accordingly, cannot win significant future projects. For instance, recent construction projects ranging from social housing, school building, and office development could easily have been completed by local companies but rather were allocated to the Beijing Construction Engineering Group to complete. This situation is probably because of political and financial reasons whereby the Mauritian Government receives conditional development grant funding and/or soft loans from bilateral donors such as China. Foreign companies have also established either permanent or temporary branches on the island to have easier access to further future projects.

There is believed to be a skill gap prevalent at the local level which is probably why the country relies heavily on foreign contractors and consultants. Furthermore, concerns about the tendering procedures and allocation of projects have also been raised. These issues were broached in a recent sector workshop by local industry professionals, with a later document published as an outcome of the workshop, which reports on the challenges facing local industry. It was entitled 'A Strategy Paper for the Construction Industry' [3].

It has been reported that there is currently a great mismatch in demand and supply of skilled labour in the country, with 38,808 foreign workers employed and circa 43,400 unemployed Mauritians, with a large percentage of these unemployed coming from within the local construction sector itself [4]. Moreover, [3] also reported that the country lacks construction sector expertise at the professional level.

However, it has been conceded that reliance on foreign skilled labour cannot be totally reduced and overlooked as Mauritians are not interested in joining this sector particularly at the operative level [3].

The subject of foreign contractors, the tender bidding process and any presumed skill shortage are key issues to be investigated under this study [5]. The need to strike a balance between the foreign and local contractors' market share is fundamental for strategic growth of the latter and for continuous local economic development, particularly since Mauritius is now aiming on becoming a high income economy in the coming decades. This conforms to early studies in this area, such as Drewer's [6], who advocated that the growth and development of local contractors are negatively impacted due to excessive penetration into the vulnerable local market by foreign contactors, particularly in the case of a developing country.

#### II. RESEARCH AIMS AND OBJECTIVES

The aim of this study was to find out the nature of foreign companies' participation in Mauritius in regards to the tendering systems that allow for their presence and their impacts on local industry's development. Also under investigation were the level of local skills, expertise, and resources amongst local entities, and any measures being taken towards improving this situation.

The objectives of this study were as:

- Identify the benefits and drawbacks of using foreign contractors.
- Assess the skills, expertise and resource shortages prevailing in similar developing countries and other SIS scenario's such as in the case of Mauritius.
- Explore industry's views about local capacity; the drivers for the presence of foreign entities; and local industry setups.
- Evaluate the disparity, and its extent, between the use of local entities and their international competitors appointed to implement local projects.

# III. LITERATURE REVIEW

The following review section explores the various studies on similar issues arising in developing countries in the African and Asian context.

#### A. Foreign Contractors

An early study by Turin [7] explained that substantial projects cannot be implemented by local contractors due to their lack of skills, expertise and resources. Reference [7], together with other researchers, nonetheless, recommended that developing countries should aim to become self-sufficient by using their local infrastructural projects to build up the capacity of local industry, or as [8] advocated, the latter should make beneficial use of foreign companies to achieve such growth. These benefits as well as drawbacks have been investigated to better grasp the involvement and impact of foreign entities on a developing country's local market.

#### B. Benefits of Foreign Contractors

Firstly, the presence of foreign contractors within the local market tends to imply increased overall competition and thus lower tender bids [9]. Reference [10] advocated that foreign entities are abler to provide developing countries with their required infrastructure since they bring their expertise, quality and updated resources that local companies may often lack. Further, their access to more funds and technical expertise also imply that complex projects are completed successfully [6], which may not have been the case if they were undertaken by local firms. Technology transfer is another beneficial outcome that local firms should seize in order to improve and progress [9], [11]-[13]. One such example is local firms in Singapore, who have been able to upgrade their operations and methods, as well as the status of the entire construction industry in that country after entering joint ventures with foreign companies [11]. They have also been forced to upgrade to be able to compete and survive, allowing them to now undertake more consequential projects [10]. Foreign firms that are recommended to be used as role models and benchmarks [14] can motivate as well as compel local industry to continuously improve. However, these benefits are often more theoretical than real as they may not all take place. For example, it is believed that foreign firms may be unwilling to transfer their technological knowledge so as to not foster greater competition with local companies [15]-[18].

## C. Drawbacks of Foreign Contractors

Reference [10] made clear that foreign entities also have negative impacts in local industries of developing countries namely: they often dominate their local markets which consequently affects growth of local companies who have less opportunities of winning major projects and build up track records; foreign contractors subcontract to small local firms that do not seek growth or have the capability to grow, which deter the benefit of technology transfer; and, big local entities cannot compete on an even footing and grow further but instead have to diversify. Similarly, this unfair competitive situation is also expressed by [6] who said that foreign firms compete at every level of the construction process and for the same scarce resources. Moreover, developing countries can become dependent on foreign companies for their infrastructural growth and this is reflected by [19] who found that due to this dependency and ease of trade, developing countries are lagging behind developed ones. It has thus been suggested that developing countries should not only regulate foreign companies' operations but should also seek to address and formulate strategies by reviewing, developing and improving the performance of local industry [10].

# D. Capacity Deficiencies in the Construction Industry

Developing countries' local construction sector capacity (i.e. the construction firms and institutions themselves), is continuously undermined due to inadequate: forward planning, skills and expertise [6], [20]; current industry regulations [21] and technologies [22]; financial stability and assets [23] as well as poor social settings and poor attitudes [24]. Reference

[25] also observed that public sector bodies of developing countries do not perform well enough to achieve their set objectives and in particular have poor management competencies. For instance, [26] showed that Tanzanian institutions could not handle strategic measures for its development due to this particular shortcoming. These multiple setbacks, as [6] noted, attract foreign firms into developing countries' local construction sector which can hinder local company growth.

#### E. Human Resource Development

Tampoe's [27] early study showed that human resources are vital elements in establishing companies' competitive advantage. However, as in Tanzania, many developing countries lack training programmes for their indigenous workforce [26], which is why [28] has advocated that capacity building should be carried out at all levels of the construction industry.

Reference [21] stated that many firms barely invested in developing their own human resources, in particular at the individual labourer level, which [29] identified as being the most challenging group as it consists of what are described as a "fractured and diverse workforce [...] characterised by non-standard employment practices", and it makes up half the workforce of a typical construction company undertaking a one-off project. Moreover, many authors criticised the lack of relationship between the educational system and the construction industry [30]. This kind of correlation conforms to Kululanga's [28] recommendation of planning and applying measures collectively for the development of all local contractors, new workers, and industry on the whole.

#### F. Organisational Structure

References [28] and [31] supported that local firms should collaborate with each other and with foreign entities to ensure more growth prospects, resources, technologies and competitive advantage. By sharing responsibility during these collaborations, local firms and their employees will also gain on increased skills and expertise [28]. However, [28] lamented that developing countries lack such strategies that could assist in the development of their numerous small construction firms. Reference [18] also observed that most of these small firms are family owned and thus have restricted growth potential as they are either "unable or unwilling to employ qualified personnel" or refuse to pass down the reins of their companies or delegate tasks due to trust and monetary factors. Although Kululanga's [28] strategies seem ideal solutions they are often not applicable due to the nature of small firms.

#### G. Industry Participation

Reference [9] praised industries that establish construction sector bodies, agencies and/or institutions that would monitor and plan for their strategic and continuous growth, rather than waiting for government's assistance. The UK is one such example where its CIB (Construction Industry Board) was set up by its industry contrary to countries such as Malaysia, Singapore [32], and Mauritius, whose sector institution was set up and run by the government. However, a 2005 report in

Tanzania rightly assessed that the government and industry should collaborate to sustain the development of a strong construction industry [22].

As was discussed, for the successful enhancement of that industry and consequently the economy, building local capacity and making the most beneficial use of foreign firms are fundamental requirements have also been identified. As put forward, the positive and negative impacts of the foreign firms will vary from country to country and while they may be real impacts in some, they may also be limited in others. Further, the shortcomings of local capacity have been studied to understand the void that is being created and eventually filled by foreign companies.

#### IV. METHODOLOGY

The empirical data collection was through individual interviews, namely by qualitative research work, to seek indepth perspectives of local Mauritian industry stakeholders. A total of fifteen semi-structured interviews were conducted with participants including experienced local contractors, engineers, architects and regulators, as well as some private sector consultants and foreign stakeholders established in Mauritius. These interviewees were categorised into three groups namely: 'Local Companies', 'Foreign Established (FE) Companies', 'Government Bodies', and the 'Private Clients'. The empirical data collected sought to obtain detailed information rather than brief and standardised data from a large number of participants, i.e. quality rather than quantity. Therefore, the semi-structured interviews consisted of both open and closed questions that enabled a direction to be maintained as well as enabling the participants to express and elaborate on any additional points that they deemed important.

#### V. RESULTS AND DISCUSSION

## A. Capacity of Local Industry

It was found that local capacity and both big and small local companies are amply qualified, skilled and experienced. They can undertake a variety of projects ranging in type, size, and value, for instance, simple residential projects as well as hospitals and restorations. However, [3] leads to believe otherwise and this belief could be as one interviewee explained in terms of local firms,

"Recruitment is an issue since in some situations we do have the skills in the country but they are not being employed."

Nonetheless, in agreement with [6] and [7], all interviewees stated that foreign expertise and assistance have always been and are still being sought for major and specialised projects, or when there are too many projects in the pipeline during economic boom periods whereby local industry may lack the necessary expertise and/ or resources including "financial stability". In these cases, all the interviewees emphasised that joint ventures, between local and foreign firms, should be used as vehicles for skills sharing, learning and acquiring experience, but condemned the practice of solely employing foreign firms for such projects. In concurrence to the literature

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review, [11] had presented that joint ventures between local and foreign firms in Singapore had contributed to an enhancement of its local firms and industry which has also been the case for companies' improvement in Mauritius, as one interviewee said,

"the joint ventures we entered into were mostly for the management expertise or assistance [...] before, we would learn a lot from them, but now, we are on the same level."

However, although an FE respondent encouraged joint ventures with foreign firms, his company would not collaborate with local ones to keep competition to a minimum unless the latter would bring them financial competitiveness. References [15]-[18] also observed this apprehension of fostering increased competition as another key impediment to the effective use of foreign companies in local companies' development. Nevertheless, the two other FE companies interviewed were open to collaborating with local firms and benefiting from two-way sharing of knowhow, resources and technologies.

Although there was shared consensus that sharing and learning takes place indirectly and automatically, it was found that such transfer was hindered due to lack of communication and teamwork between parties, lack of return of information from local parties, or even skewed relationship power dynamics between parties. These consequently also impact upon the effective delivery of projects as evident from a recent local article whereby parts of the new airport in Mauritius, the construction of which was carried out by a Chinese company, are requiring urgent reworks due to the fact that the local context was not taken into consideration during the construction phase, an issue that local contractors have now been called in to resolve [33]. Although this case is not a joint venture, it proves that collaboration and effective communication with a local counterpart could have avoided some of these issues.

Regarding the issue of skilled labour, the big contracting firms that were interviewed all subcontract to both local and foreigner companies due to a lack in local skilled labour, particularly in the past when there were many projects underway. As one respondent said,

"Mauritian labour is not enough to cater for the needs of the projects. Currently, we have the local skilled labour to cater for the present projects though, unlike in the past where there were a lot of projects and we were lacking workers in numbers".

On the other hand, findings proved that local firms are able to undertake certain projects carried out exclusively by foreign firms at the moment. For these projects, it was found that the main reason for losing the contract to a foreign firm was commonly due to the lower tender price offered by the latter and not due to any inherent capacity issue amongst the former to undertake these projects. In other words, the local firms met "all the criteria" technically, that is, resources, skills and experience, but had an overall higher tender bid. Also, interviewees raised the issue of corruption, favouritism and lobbying in the industry which impacted on awarding of

contracts. One more reason stated by interviewees, which is also in line with literature findings [18], [23], [24], was the local company's inability to secure financing particularly amongst smaller ones.

# B. Capacity Building Measures Within Companies

Study findings discovered that there are poor, inefficient and unproductive measures being undertaken by companies and organisations in the local construction sector especially in regards to employee training. Interviewees from Governmental institutions and organisations in this sector of Mauritius complained of the inadequate and irregular training and IT support provision, particularly for new and updated software, all of which are necessary for personnel and sector growth and development.

Only big local and FE companies had identified career pathways for employees; structured training programmes; and, actively invested in research, development, and technologies contrary to small local companies that lacked inherent capacity. The latter only provided unstructured on-the-job training that was not always successful or even relevant. As one responded correctly remarked,

"Most Bricklayers learn on site and on-the-job, whether that way of working is right or wrong."

Then again, an interviewee from a small FE company greatly valued and encouraged continuous training and transferring knowhow. However, he was saddened by the mind-set of small local firms who due to being profit-driven do not want to disburse funds for training purposes. Additionally, the small local firms also barely invested in technology which they argued was due to their size and nature of operations. Often they use labour intensive methods with existing technologies being adequate to cope with their daily operations, with any training for their small number of employees potentially impacting or even halting their operations (also observed by [23]). These existing technologies that are widely used in the local sector have been nonetheless criticised as being outdated.

Small local firms were also criticised for their short term planning and lack of growth aspiration, which as a Government interviewee explained:

"Small companies are not bothered to grow or invest as long as their targets, in terms of profit, are met. They don't have any long term plans."

Nonetheless, these small local companies argued that they have already grown since their set-up and there is no need to grow further. As [18] had noted, the owners of the small local firms would not trust non-family members to take charge once they retired due to monetary factors and due to clients trusting only the owner.

It is important to note, and as recommended by [28], that any improvement measures should be implemented at industry level in regards to capacity building within the local construction sector, and these measures should be implemented collectively with involvement of all stakeholders.

#### C. Industry's Engagement and Actions

Most interviewees complained that currently the sector as a whole was inefficient, and not everyone was sufficiently involved in its improvement and development, in particularly sector institutions. Kululanga [28] had rightly criticised that developing countries lack collaboration between all the entities concerned, and this appeared to be the case for Mauritius as well. As observed by one respondent,

"Each company does its own training. We have no synergies amongst firms to do that."

Collaborations between the industry, companies and the education system for capacity building within the sector, and to raise awareness and to encourage youngsters to join this sector were said to be greatly lacking in Mauritius. Most importantly, the interviewees deplored the fact that there was a total lack of career guidance, and structured and planned measures for those at the operative level. The only measures available at present were unsuccessful training schools and the undersubscribed Training Grant System provided by the Human Resource Development Council (HRDC). This grant is an incentive for employers to provide training, the cost of which is partly reimbursed [34]. However, although encouraging training amongst employees, one interviewee expressed that

"smaller companies may not have the resources to train their employees although part of it is reimbursed".

A Government respondent yet again put forward the profit-driven attitude of all firms whom he remarked as unwilling to provide training even though part of the cost would be reimbursed under this scheme. It was further remarked that local Mauritian companies needed to take responsibility and lead instead of constantly waiting for Government to provide assistance, guidance and/or funding. Further, the interviewees all commented that academically weak people join the sector at operative level since this was seen as a last resort in employment terms. A local contractor observed that this situation is dependent on the level of a country's development. He stated that:

"If it is an under developed or developing country, it will have lots of labour, as it is usually the uneducated people who enter the construction sector especially as labourers, [...] As for a developed country, there won't be enough labour and thus it will need to be imported. It is a natural occurrence. People are educated and will choose better working environments, opportunities and salaries."

Indeed, most interviewees acknowledged that people who are interested in the local construction sector are only interested at professional levels, but even then, they are not fully convinced in joining the sector as there are too many uncertainties, and too much lobbying and corruption within the industry. This uncertainty, which is due to a lack of implementation of projects amongst local firms, causes: a lack of investment from private sector bodies thus hindering development and limiting the ability of local companies to grow further; a lack of visibility and inability to plan for the long term; and, a poor profile amongst the public with

youngsters not knowing which skills and qualifications to acquire. All these factors impede long term planning efforts for the whole industry. Further, the improper management of resources, including allocation of funds for projects, and use of outdated technologies have been said to be major factors holding back the growth of the local construction sector while others remarked that a lack of demolitions of obsolete buildings leads to increased use of scarce land for further new development. It was thus established that the industry needs a thorough reform, one that youngsters, with a changed mentality and perspective, will ideally be encouraged to join. An "integrated development" and "integrated working practice" was recommended. Any recommended reform measures should be undertaken in conjunction and in harmony with each other, a practice that is usually missing [35].

#### D. Foreign Companies

Reference [6] highlighted the fact that the actual entity that constructs a project in a country is just as important as the total volume of projects a country has. However, there were mixed views regarding the amount of foreign entities in the Mauritian construction sector and the drivers for their presence.

There were equally divided responses about the number of foreign companies in the local market, with some stating there were far too many and others stating there were just enough. Most of the latter agreed that most projects were implemented by Mauritian companies and only those one-off projects requiring specific expertise made use of foreign entities, but then again, they restated that these one-off projects should be conducted as joint ventures with local firms and not fully implemented by foreign companies particularly during an economic downturn. On the other hand, those who said there were too many foreign players, criticised: the excessive presence of Chinese contractors; the government's or private sector's constant quest for the lowest tender price; a perceived un-level playing field as local firms lose projects to foreign companies because the latter had lower tender prices (often because of imported cheap Chinese labour) and not because local companies lacked any ability to execute the project; and, the government's international diplomatic relations with funding countries and bodies, whose conditions of contract usually meant that often a predetermined foreign entity would be appointed for projects funded by these bodies. This situation is mostly common amongst Chinese-funded projects whose contractors bring their whole supply chain of human resources and do not employ any, or extremely few, local skilled labour. Even an FE consultant interviewee observed that most projects could have used the local workforce. Another interviewee also remarked,

"This threat comes mostly from the Indian and Chinese contractors and not from European ones."

Research showed that Chinese contractors usually do not respect regulations such as the agreed percentage of local workforce to be employed, and with no proper monitoring and enforcement system in place, no one can verify that they break these contact conditions. Moreover, the percentage of local

## International Journal of Architectural, Civil and Construction Sciences

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and foreign workers to be employed under current government contract rules, places local firms at a distinct disadvantage. Regulations are that local contractors are only allowed to import 35% of their labour which is contrary to foreign contractors who can import up to 85% [3]. This consequently enables foreign firms to have lower tender prices due to cheaper imported labour. Although a foreign company wins projects due to its lower tender price or due to conditions imposed by funding bodies, the latter may not necessarily be better implementer as was observed by some respondents and supported by the work of Chand [36]. He looked at the case of another SIS country, namely Fiji, whereby the World Bank awarded a contract to a foreign company instead of a local one which had proven competencies. However, the contract ultimately had to be re-awarded to a local firm due to the poor performance of the foreign company. Additionally, in accordance with other literature [6], respondents criticised the fact that foreign firms would settle in Mauritius and occupy the local market by competing for other local projects which were already scarce.

The tendering system has been further criticised for being weak and allowing for malpractice. As a Government official stated,

"The problem now is that the evaluation methodology we currently have in place does not allow us to know if the company awarded the contract will be able to execute the project successfully. [...] if someone knows how to game the system, that is, knows how to land the contract by adjusting their bid accordingly, even though they don't really meet the technical requirements, they will win it."

Further, another Government official also alluded to corruption by referring to "unequal distribution of projects" due to extensive lobbying by some that consequently limited opportunities for the local firms. Nonetheless, increased regulation may not necessarily solve this issue. As an FE contractor noted.

"It is all about the example being set from the top, which is not there. Our ethics are really weak and this is very worrying. It is not a question of more regulation, but more of ethics."

As was established, although most entities interviewed welcomed healthy competition, they strongly disapproved of current weak tendering and procurement systems that are creating factors impeding the growth of local firms, particularly during recession periods that alternatively facilitate foreign entities' entry into the local market. Hence, it was deemed important that any breaches of regulations were not overlooked or tolerated, and malpractice and corruption was eradicated, with current sector strategies being reviewed and strengthened accordingly. Consequently, this would provide a nurturing environment for local firms and hence improve local industry and economic conditions.

# VI. CONCLUSION

Interviewees more or less agreed to the benefits and drawbacks of having foreign entities competing within the

local construction sector, but deplored the fact that too many foreign firms undertake projects on their own rather than collaborating with local firms. Additionally, it was found that: there is an adequate availability of professional skills and expertise within the Mauritian construction industry but a lack of skilled labour, particularly for the future should there be a boom; projects awarded to foreign firms are either due to their uniqueness or size, and hence lack of local knowledge or resources respectively, or due to foreign firms having lower tender bids; it is the poor management of resources (human, financial and technological), that leads people to believe that the industry's capability is worse than it actually is; the industry is poorly structured and managed; stakeholders do not grasp the importance of encouraging youngsters to join this sector; there is a lack of mutual involvement and collaboration between stakeholders, particularly for capacity building which are fundamental requirements in ensuring the succession of a proficient workforce; very few companies invested in effective capacity building and technological developments as cutting costs and increasing profits are more important; small local entities have short term vision that discourage long term investment in workforce training and development; there are major uncertainties within the sector which result from the lack of visibility due to lack of implementation of projects; there is a lack of long term vision and planning which inhibits the fruitful growth of this industry; and the industry is underperforming and lacks a career guidance unit leading to a high level of ignorance of this sector's characteristics and opportunities amongst the local population.

The aim of this research was to appraise whether the local capacity and its tendering processes are allowing the dominant participation of foreign entities on the local market. It was hence found that the local industry is highly competent, qualified and experienced, but that it is the tendering and procurement systems in Mauritius that are not conducive enough to allow for effective strategic planning and an equitable allocation of projects during an economic downturn so that the broadest spread of stakeholders' benefit. There is an urgent need for government bodies, local companies, international firms, and other industry players to collectively collaborate to develop and adopt transparent tender strategies that encourage good and fair competition in this sector.

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