

# CONSTRUCTION INDUSTRY INVESTMENT CHALLENGES: BARRIERS FOR SME EXPANSION

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## ABSTRACT

*This research concentrates upon the requirements for expanding Small and Medium (SME) contractors into the level of large scale contractors and barriers for such. Adequate assets are a key requirement for succeeding in construction business. Construction companies have many physical and intangible assets. Given the SMEs fulfil required asset levels, with proper management, it is possible for SMEs to expand over time and achieve the goal of becoming large scale organisations. However, improving the grades should not focus only upon turnover, yet various other resource and management requirements need to be met.*

*In order to identify the exact requirements of SME to large scale conversion, necessary asset level changes and barriers for such conversions were required to be analysed. A quantitative approach was taken in collecting field data and the data were collected through a questionnaire survey. Contracting organisations were considered as the unit of analysis and data were collected from 205 units with a response rate of 76%.*

*The research reveals the necessity of improving annual turnover, P&E, and staff assets of SMEs in reaching the large-scale organisation level. In doing so; management issues, lack of finance and motivation, and employees with insufficient knowledge and skills are the critical internal challenges. The external barriers were identified as: high cost of capital, inadequate financial structure, changes in the government policies and the political unrest, and lack of information. Thereby overcoming the identified barriers will enable SME expansion, which will increase construction industry investment complementing the economic development.*

**Keywords:** Asset levels; Barriers; Construction industry; Investment; SME.

## 1. INTRODUCTION

The construction business is one of the fastest mounting industries around the globe (Beesley and Caron, 2012). Consequently, technological, political, economic and social facets as well as their interrelatedness have to be considered within a study of the construction sector's future achievements (Bourdeau, 1999).

In construction industry, stakeholders include a wide range of entities that directly or indirectly can provide support or resistance to the accomplishment of project objectives (Walker and Derek, 2000). However, contractors are being identified as one the main stakeholders being an important investor to the construction business. In Sri Lanka, Construction Industry Development Authority (CIDA) offers national registration and grading schemes for construction contractors. These grading schemes help to determine the general ability of the contractors (ICTAD, 2013).

To sustain the present market conditions, Small and Medium Enterprises (SME) need to expand their companies. Love and Irani (2004) found the main competitive power for SMEs within the construction industry depend on the role of the owner or manager of the company, investments in intellectual capital, investments in information and communication technology, and the skill to adapt to change. However, the greater deviation in continuity, profitability, and growth of SMEs compared to larger firms accounts for special problems related to financing. Such financing concerns differ considerably between those which grow slowly and those which

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grow rapidly, as well as between exiting and new firms (Crichton, 2006). The expansion of private equity markets, including informal markets, has greatly improved the access to venture capital for start-ups and SMEs, but considerable differences remain among countries. In such background, SME expansion will necessarily enhance the investments in construction industry vice versa.

## **2. LITERATURE REVIEW**

Development of SME sector is foreseen contributing to transform of lagging regions into emerging regions in terms of prosperity. Even SMEs are the most defenceless sector inside a country's economy, it directly affect the economic performances (Crichton, 2006). Romero-Martinez *et al.* (2010) state SME sector as one of the main motor behind a country's economic growth. SME sector has been identified as an essential strategic sector, in the overall policy objectives of the Government of Sri Lanka (GOSL). Accordingly, in local context, SME sector is seen as a driver of transformation for inclusive economic growth, regional development, employment generation and poverty reduction.

SME is a very heterogeneous group. Statistical measures for size and standard of SMEs varies along countries. Yet, typically, such measures are based on number of employees, and value of sales and assets. The commonly used variable is the number of employees as due to its ease of collection (Manley, 2006). Hence, the development strategies for SMEs will be importantly country and context specific. Each country will have its own issues and opportunities for change. Moreover, resources available for implementation will vary along countries, therefore the results achieved will also may vary (Bannock, 2005). Hence, the emphasis should first need to be towards the identification of the current asset portfolios of construction industry SMEs.

### **2.1. ASSETS PORTFOLIOS OF CONSTRUCTION ORGANISATIONS**

Assets are used by companies to make benefits (The Complete Guide to Portfolio Construction and Management Snopek, 2013). The main objectives of having assets are to get the best return from the investments and to achieve goals as of organisational strategic plans. Assets, therefore, are a key in succeeding construction business. Construction organisations have many physical and impalpable assets. Construction accounting comprises of two main groups of accounts on assets as; tangible and non-tangible. Tangible assets have a definite physical form (The Complete Guide to Portfolio Construction and Management Snopek, 2013). Tangible assets can be classified as non-current tangible and current tangible assets. Non-physical assets, which are important for the business are called as intangible assets (Jaunzens, 2001).

In considering the development of firms, small firm growth theorists (Davidsson *et al.*, 2005) refer growth as the change in an organisation's size, which is a multidimensional phenomenon that necessarily happens over time. In the analysis of firm growth from the change- in-size perspective, growth has been measured with a range of different indicators in the literature; the most frequently suggested being sales, revenue, employment, assets, physical output, market share and profits (Ardishvili *et al.*, 1998; Delmar, 1997; Weinzimmer *et al.*, 1998; Wiklund, 1998).

Accordingly, in the context of this study, multiple indicators i.e. turnover, e.g. Plants and Equipment (PandE) assets, and permanent skilled employees were used to measure SME growth performance in construction sector. These indicators are chosen also considering the South African Construction Industry Development Board (CIDB)'s indicators of company growth and development. Whereas, financial capability, works capability, and number of registered skilled professionals in a firm are the main necessities for progressing through CIDB contractor grading system in South African construction industry.

### **2.2. RELATIONSHIP BETWEEN ORGANISATION ASSETS AND CONTRACTOR GRADING**

The service of grading given by an independent body's opinion based on the quality of the entity graded, enhances the lenders' confidence upon the construction service providers (IMACS, 2011). Besides, grading benefit participants by highlighting their competencies and helping them stand out in a crowd (Balachandra, 2014). Opportunities for new comers to the market are generated by contractor grading systems and it greatly helps to clients in identifying proper contractors for their projects. Hence, in Sri Lankan construction industry, there is a unique grading methodology developed by CIDA urbanised for the purpose.

CIDA as the government apex body in Sri Lanka to regulate construction industry implements a process of grading construction contractors. For assessing capabilities of prospective contractors, there is a screening process in registration and grading. The process facilitates determining contractors' general ability to undertake different types and sizes of projects without placing preference to any specific contractor. Financial capability, technical ability with staff and Pande, and the experience gained in relevant fields will be evaluated in registration and grading (CIDA, 2015). It is observable that the number of contractors registered under lower grades with financial strength limited to SL Rs. 1.0 M to SL Rs. 2.0 M is comparatively high (ICTAD, 2013). According to several industry experts, poor access to sources of funding is the key reason for a majority of the contractors to remain below the limitations of higher grades (Balachandra, 2014).

### **2.3. CHALLENGES AND OPPORTUNITIES FOR SME EXPANSION**

Developing a new organisation and organising its development are viewed as a process of carrying out organisational change, with external and internal elements. However, the development and growth of the SME sector inside the construction industry is hindered by various barriers. Barriers to change can originate from a range of factors in an organisation. Such barriers, therefore, can be classified as internal barriers and external barriers (Davidsson *et al.*, 2005).

Common internal barriers were identified in the literature as; management issue, organization regulation, lack of employees, inefficient staff, employees with insufficient knowledge and skill (Baron and Shane, 2007), lack of financing (Olutunla and Obamuyi, 2008), lack of motivation (Schwartz and Hornych, 2010), poor book keeping (Tushabomwe-Kazooba, 2006), inexperience in the field of business (Omerzel and Antonic, 2008), lack of market research (Mbonyane and Ladzani, 2010), and weak institutional capacity (Kayanula and Quartey, 2000).

Further, the external barriers were identified as; legal barriers (Zahra and Ellor, 1993), inadequate financial structure (Kayanula and Quartey, 2000), firm regulations, trade regulation, tax regulations, changing government policies (IPS, 2002), corruption (Chandanie *et al.*, 2004), labour regulation (Urban and Naidoo, 2012), cost of capital (Thalgodapitiya and Dakshitha, 2008) and keen competition for limited capital (Zahra and Ellor, 1993) as per theory.

### **2.4. OBJECTIVES FOR THE SUCCESS OF SME SECTOR**

Profitability, survival and growth are the greater variance of in terms of challenges for SMEs compared to larger firms, since they accounts for special problems in financing. Hence, the SME sector of the construction industry must have a vision and series of strategies for development that encourages stability, international competitiveness and capacity enhancement. The expansion of private equity markets, including informal markets has greatly improved the access to venture capital for SMEs, yet considerable variations remain amongst countries (Mbonyane and Ladzani, 2010). SMEs, therefore, should need to be managed in a personalised way, free from outside control in taking principal decisions (Burns, 1989).

## **3. RESEARCH METHODOLOGY**

The research was initiated with a literature synthesis analysing the asset levels of the organisations allowing to classification of organisations based on the asset levels they possessed. Accordingly, the organisations were categorised into three as small (C7 and above), medium (C2 to C7) and large (below C3), following CIDA grading system. Basically, CIDA grading is based on the level of assets possessed by the companies. Further, the barriers faced by each organisation category; small and medium were investigated. A survey approach was adopted in order to identify the asset levels and critical barriers for organisations. Questionnaire survey was carried out by collecting data from 205 organisations including 100 small scale contractors, 80 medium scale contractors and 25 large scale contractors with an overall response rate of 76%. Weighted mean was calculated in order to find the critical barriers for the each organisation category.

## **4. RESEARCH FINDINGS AND ANALYSIS**

It is evident that the asset level of an organisation has a deep impact upon the grading of the organisation. Hence, the asset levels possessed by the sampled organisations were analysed based on; the type of projects

involved, annual turnover, number of projects that have been carried out in the last two years and the details of the PandE, and the management staff.

**4.1. ANALYSIS ON THE ASSET LEVELS OF THE ORGANISATIONS: PROJECT TYPES CARRIED OUT**

There are five categories of projects as identified by CIDA. However, not all the contracting organisations undertake all types of projects. In Figure 1, it is visible that all the contracting organisations carry out building projects, while the larger organisations perform all kinds of projects. Bridge projects are only handled by large scale organisations. Medium scale contractors involve in highway and water supply and drainage projects in par with large scale organisations.

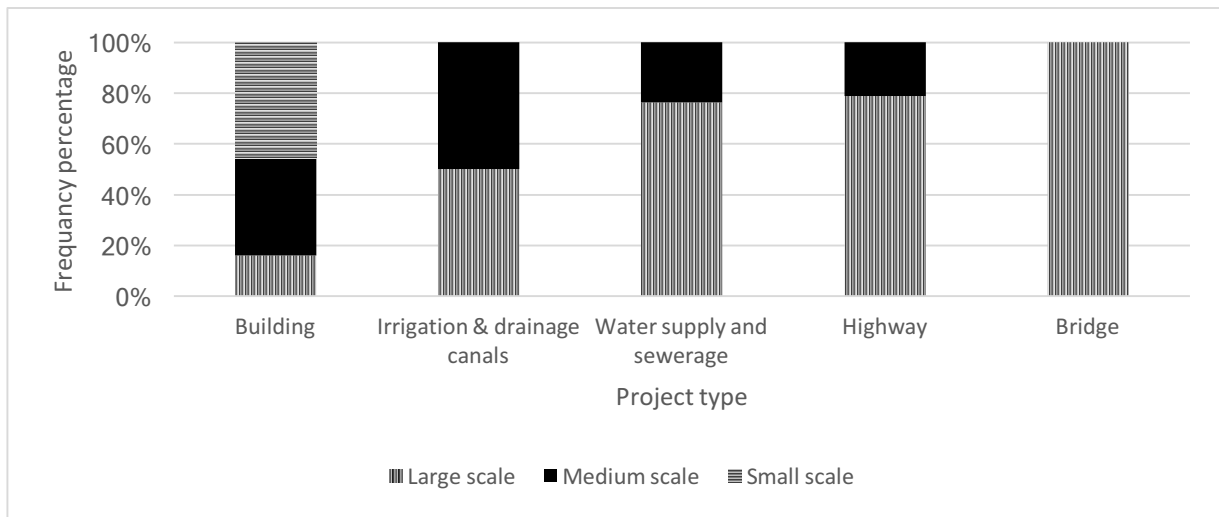


Figure 1: Project Types Carried Out Against Organisation Scale

It shows that the medium and the large organisations are only involved with different types of projects, where small contractors are limited to the building projects alone. Moreover, only a very few medium scale contractors undertake other types of projects.

**4.2. ANALYSIS ON THE ASSET LEVELS OF THE ORGANISATIONS: ANNUAL TURN-OVER**

The annual turnover against the scale of the three organisation categories are displayed in Figure 2.

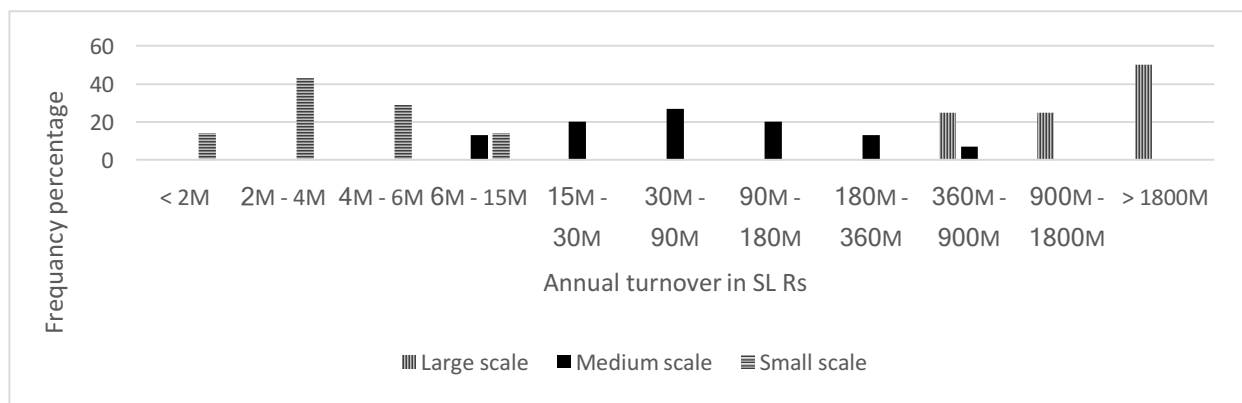


Figure 2: Annual Turnover Against Organisation Scale

It is visible that higher the grade, more the turnover. The small organisations have been limited to a turnover very much less than 15 million Sri Lankan Rupees (SL Rs.). As per CIDA, the annual turnover for the large organisations are required to be more than SL Rs. 360M. Similarly, medium organisations should possess annual turnover within SL Rs. 6M to 360M. The rest of the organisations below such levels are considered as small organisations.

As per Figure 2, organisations which are in the upper border of the medium level organisations, that is C2, accomplishes the requirement of turnover for large scale organisations of SL Rs. 360M. However, the

percentage is not a considerable amount since only 40% of the C2 organisations have achieved such feat. Similarly, 10% of the C7 organisations have achieved similar feat by entering into the requirements of medium scale organisations. Hence, it is quite visible that the organisations in the upper border of the medium and the small organisations are trying to achieve a stable point in the annual turnover for the next league.

#### 4.3. ANALYSIS ON THE ASSET LEVELS OF THE ORGANISATIONS: RANGE OF PROJECT VALUES COMPLETED IN LAST TWO YEARS

Number of projects and its value is a good measure to compare the current status of the contracting organisations in the construction industry. Since the sample sizes vary to one another, the average number of the projects were considered for each grade. Results are quite similar to the pattern of the results for annual turnover since it has a direct connection over the annual turnover. Larger the organisation, larger projects in terms of value has been handled. However, the medium scale organisations tend to handle larger projects as well. Figure 3 shows that majority of small organisations carrying out the projects, which falls under the category of SL Rs. 2M to 5M.

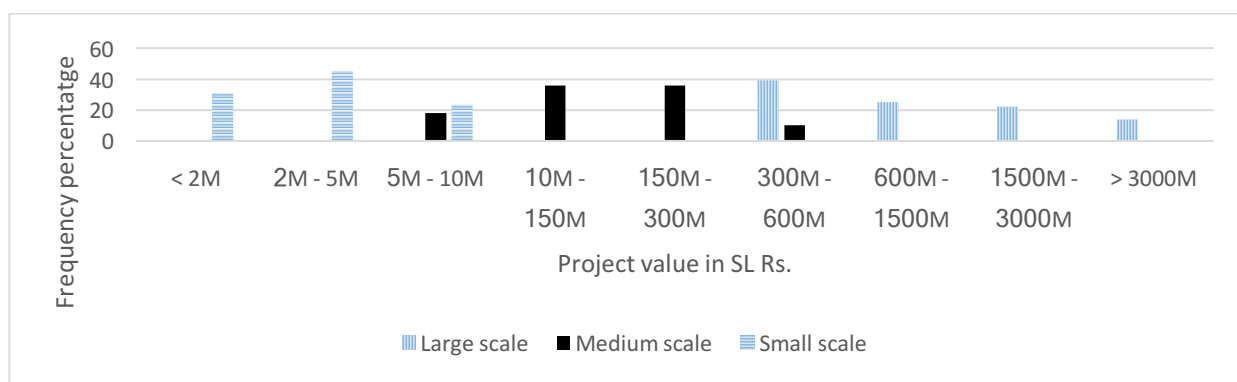


Figure 3: Project Values Against Organisation Scale

Similarly, the medium scale organisations undertake projects mostly between SL Rs.10M to 150M and SL Rs.150M to 300M. However, large organisations perform the projects under the categories according to their strength as per CIDA guidance. According to the CIDA guidelines, the upper border for the small organisations stays as at SL Rs.10M. Hence, small organisations perform the projects in their allocated range. Similarly, the medium organisations perform the works that falls under their range. However, the lower limits have not been a barrier in obtaining low value projects. Large organisations perform the works which fall lesser to their limits, which fall under the category of medium scale organisations. Similarly, the medium scale organisations perform the work below their allocated range. That is from the range of the small scale contractors, which is a problematic situation for SMEs in obtaining projects.

#### 4.4. ANALYSIS ON THE ASSET LEVELS OF THE ORGANISATIONS: CONSTRUCTION PLANTS AND EQUIPMENT

Construction PandE as assets are one of the key possessions of an organisation. Figure 4 clearly displays that the small organisations lack in the construction PandE and related assets. However, medium and the large organisations possess almost all the PandE required for construction work. Hence, there will be no issues with the construction PandE as an assets requirement for the medium organisation in expanding into a large scale organisation. However, this will be a severe barrier for the small organisations, as it portrayed in percentages.

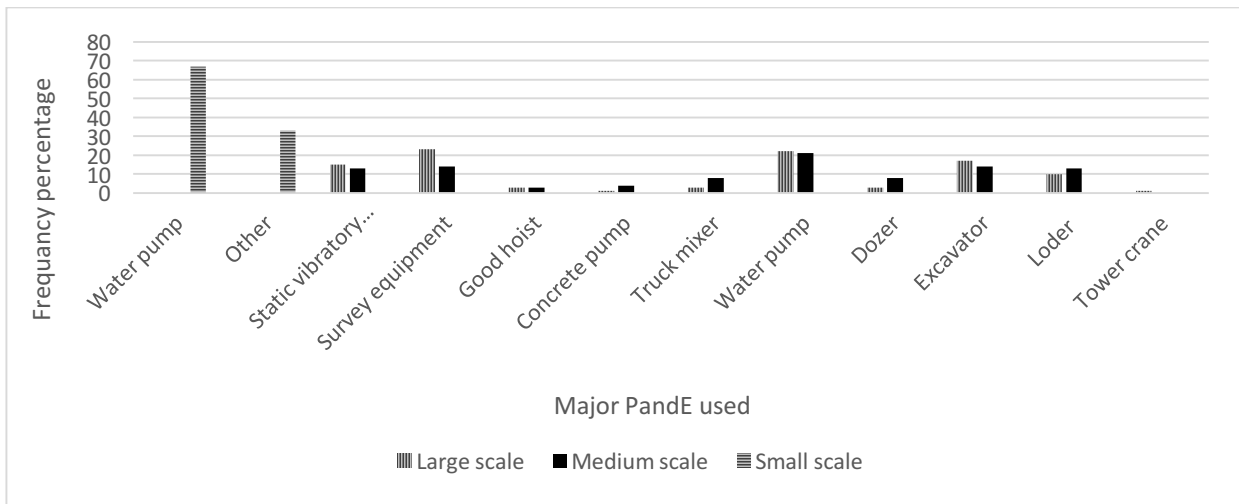


Figure 4: Plant and Equipment Against Organisation Scale

Hence, the number of required equipment may vary by large amounts for small scale organisations in moving into the medium scale organisation level.

#### 4.5. ANALYSIS ON THE ASSET LEVELS OF THE ORGANISATIONS: MANAGEMENT STAFF

The construction management staff available at each organisation level has been considered for the analysis. The percentage composition of the staff within the researched sample is shown in Figure 5.

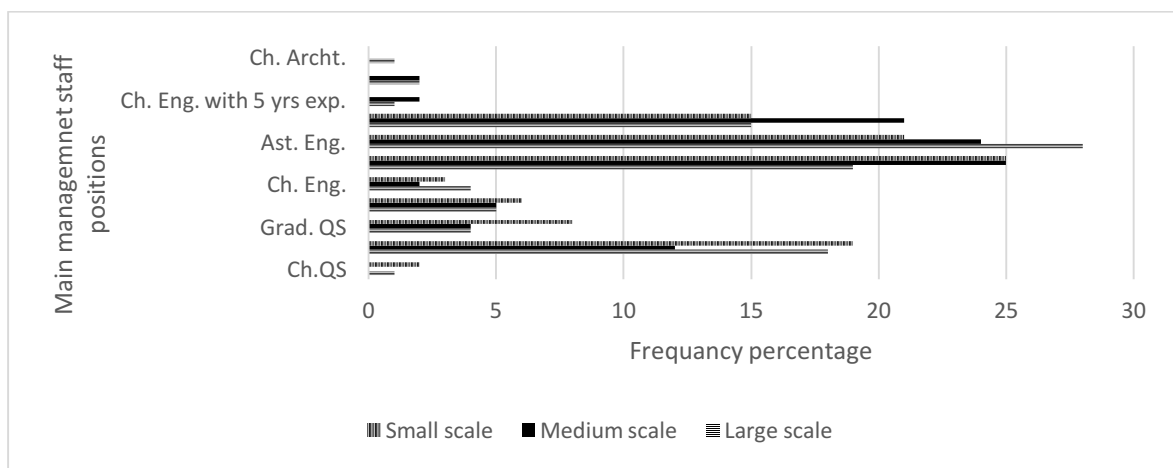


Figure 5: Management Staff Composition Against Organisation Scale

It was revealed that, small contracting organisations do not have highly qualified staff, in general. There are no considerable numbers of experienced chartered professionals at the small-scale organisations. In fact, chartered and qualified categories of professionals were only available with large contracting organisations and medium scale contracting organisations.

Small organisations only possess minimum requirement of the staff. However, compared to architects or quantity surveyors, more qualified engineers have been found in any organisation. Composition of the less qualified staff including assistant engineers, incorporate engineers, and assistant quantity surveyors are of almost same in percentage amongst scales. Yet, highly qualified professionals make the difference between organisations. As per CIDA requirements, to move from small scale to medium and large scale, highly qualified professionals in the staff is a prerequisite, where in the sample of large organisations possess the highly qualified professionals, while small scale organisations do not possess such qualified staff.

Therefore, analysed various assets levels of the organisations urge the need of improving SMEs in terms of assets to expand the organisations. The paper hereon presents the barriers for such expansions.

#### 4.6. ANALYSIS OF THE BARRIERS FACED BY SMES

The research identified the critical barriers faced by SME contractors in expanding the organisations. Moreover, the internal barriers and the external barriers were analysed separately for each small and medium organisations.

- **Internal barriers for small scale contractors**

Table 1 provides the internal barriers identified through the literature survey for the small scale contractors as ranked by the respondents considering the severity.

Table 1: Internal Barriers for Small Scale Contractors

Code	Internal Barriers	Mean	Rank
IB 1	Management Issues	4.309	1
IB 6	Lack of Financing	4.259	2
IB 7	Lack of Motivation	3.148	3
IB 10	Lack of Market Research	3.148	4
IB 5	Employees with Insufficient Knowledge and Skill	2.679	5
IB 4	Inefficient Staff	2.506	6
IB 9	Inexperience in the Field of Business	2.383	7
IB 11	Weak Institutional Capacity	2.370	8
IB 2	Organisation Regulation	1.938	9
IB 8	Poor Book Keeping	1.938	10
IB 3	Lack of Employers	1.815	11

Accordingly, management issues, lack of financing, lack of motivation, and lack of market research were identified as the most critical internal barriers for the small-scale contractors in expanding into a medium scale organisational level.

- **External barriers for small scale contractors**

Table 2 shows the external barriers faced by the small-scale organisations.

Table 2: External Barriers for Small Scale Contractors

Code	External Barriers	Mean	Rank
RB 9	Cost of Capital	4.148	1
TB1	Lack of Information	4.061	2
RB1	Inadequate Financial Structure	4.012	3
RB 2	Firm Regulations	3.712	4
SB2	Lack of Effective Support	3.469	5
RB 8	Political Unrest	3.185	6
RB 7	Labour Regulation	3.123	7
TB2	Technical Knowledge	3.062	8
RB 5	Changing Government Policies	2.901	9
SB3	Market Research Information	2.901	9
RB 10	Competition for Limited Capital	2.79	11
RB 4	Tax Regulations	2.445	12
SB1	Unfriendly Environment	1.938	13
RB 3	Trade Regulation	1.852	14
RB 6	Corruption	1.223	15

Therefore, cost of capital, lack of information, inadequate financial structure, firm regulations, lack of effective support, political unrest, labour regulations, and lack of technical knowledge were identified as the most critical external barrier for the expansion of small scale contracting organisations.

- **Internal barriers for medium scale contractors**

Similar to the internal barriers for the small-scale organisations, internal barriers of medium scale organisations were analysed using weighted mean. The findings are presented in Table 3.

Table 3: Internal Barriers for Medium Scale Contractors

Code	Internal Barriers	Mean	Rank
IB 1	Management Issue	3.724	1
IB 4	Inefficient Staff	3.517	2
IB 3	Lack of Employers	3.328	3
IB 5	Employees with Insufficient Knowledge and Skill	3.310	4
IB 6	Lack of Financing	3.207	5
IB 7	Lack of Motivation	2.966	6
IB 2	Organisation Regulation	2.948	7
IB 8	Poor Book Keeping	2.862	8
IB 9	Inexperience in the Field of business	2.793	9
IB 10	Lack of market research	2.552	10
IB 11	Weak Institutional Capacity	2.241	11

Among the eleven barriers, the most critical internal barriers for medium scale contractors are; management issues, inefficient staff, lack of employees, employees with insufficient knowledge and skill, and lack of financing.

Therefore, it is evident that, management issues and lack of financing are commonly disturbing the expansion of the SME sector in the construction industry as internal barriers.

- **External barriers of medium scale contractors**

External barriers to be faced by the medium scale contracting organisations in expanding into large scale are presented in Table 4 in the order of severity.

Table 4: External Barriers for Medium Scale Contractors

Code	External Barriers	Mean	Rank
TB 2	Technical Knowledge	3.569	1
RB 4	Tax Regulations	3.552	2
RB 6	Corruption	3.397	3
RB 8	Political unrest	3.379	4
RB1	Inadequate Financial Structure	3.224	5
RB 3	Tread Regulations	3.103	6
SB3	Market Research Information	3.052	7
RB 5	Changing Government Policies	3.034	8
TB1	Lack of Information	3.034	9
RB 2	Firm Regulations	3.017	10
RB 10	Keen Competition for Limited Capital	2.966	11
RB 7	Labour Regulation	2.379	12
SB 1	Competition Unfriendly Environment	2.224	13
RB 9	Cost of Capital	2.000	14
SB2	Lack of Effective Support	1.379	15

Accordingly, ten factors were identified as critical external barriers among the 15 factors analysed. They are; technical knowledge, tax regulations, corruption, political unrest, inadequate financial structure, trade regulations, market research information, changing government policies, lack of information, and firm regulations.



Therefore, lack of information, inadequate financial structure, firm regulations, political unrest, and technical knowledge are the common external barriers for the SME expansion in construction industry.

Considering the asset level analysis, in overcoming the barriers for SME expansion, for a small contracting organisation, firstly, it would be required to establish the organisation in terms of vision, mission, management and staff. In doing so, building up the team spirit is vital and it would require extra efforts in stabilising the organisations. The establishment of a small scale organisation structure will need creating a business hierarchy to increase the efficiency and effectiveness of the business operations. Further, small scale contractors will need to give more attention to the social projects to gain good name in the society, which will help to raise their demands gradually. Further, it is required to strictly follow the government regulations to survive in the industry and to get incentives from government.

Similarly, medium scale contractors have to incorporate innovations to their projects. Moreover, proper documentations will help to develop the organisation in various ways. A solid top management system is required to be established to achieve the organisation goals in a shorter period, efficiently. Firm top management need to provide opportunities to grow and learn, and let the employees know their contribution for advancement of the company. Encouraging goal setting and letting employees contribute in such attempts also are important. Accordingly, the management should recognise and reward good work to promote best practices, which are necessary in advancing construction business.

## 5. CONCLUSIONS

This study analysed the barriers for expansion of small and medium contracting organisations in Sri Lanka. In grading the organisations, categories were identified as; large, medium and small in an asset perspective following CIDA grading criteria. As per the study, the SME contractors are almost limited to building construction work at the moment. However, the annual turnover of the medium and small contractors in higher grades are comparatively high, indicating positive financial capacities, which are necessary for expansions. Resultantly, the SMEs are currently involved in projects of high value. However, lower limits for project values as approved by CIDA does not evade large organisations obtaining small projects, reducing the business opportunities for SMEs. In terms of PandE assets, medium scale organisations are coping well, while small scale contractors need major improvement. Moreover, level of management staff available at SMEs are well below the requirements. Hence, it will be essential for SMEs to obtain lacking assets in expanding into large scale establishments. The critical barriers in doing so are; management issues, lack of finance and information, inadequate financial structure, firm regulations, political unrest, and lack of technical knowledge. Therefore, the interested SMEs should need to take necessary measures to overcome such barriers in order to continue with organisation expansions.

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