

Impact to the Quantity Surveyors Due to the Current Economic Crisis in Sri Lanka

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ABSTRACT

This research focuses on the impact to the Quantity Surveyors due to the current economic crisis in Sri Lanka. The Easter bomb attack, covid 19 pandemic, and political instability can be seen as the proximate causes of the current economic crisis, while there were many structural issues of the local economy which had paved way for the same. As a developing country, the crisis had a stronger impact on the construction industry than other industries of the economy. The main reasons for the collapse of the construction industry are the suspension of construction projects by the government, the increase in the price of construction materials, the lack of investors to invest in new projects, and bottlenecks in terms of wrong policy directives. The professionals in the construction industry were severely impacted by the downfall. Among the professionals in the construction industry, this study focusses on QSs- (Quantity Surveyors). Thirty (30) semi-structured interviews were carried out in terms of data gathering. The survey findings demonstrated the type of organization and working experience of QSs. The collected data were analyzed using techniques of thematic analysis. Moreover, the findings identified factors which were the challenges due to current economic crisis and proposed strategies to help overcome those challenges.

Keywords: *Quantity Surveyors, Sri Lanka, Crisis, Challenges, Strategies.*

1 INTRODUCTION

Sri Lanka is experiencing the worst economic crisis in its history. The crisis hit many sectors of the economy in Sri Lanka. The Sri Lankan government has taken large amounts of credit from international lenders during the past decade. Excessive financing for non-profit development initiatives has plunged the government into debt. According to the Central Bank of Sri Lanka, national consumer price inflation has nearly tripled, rising from 16.8% in January 2022 to 58.9% in June 2022 (Central Bank of Sri Lanka, 2022c). The country must repay almost \$4 billion in debt throughout the remainder of this year, including a \$1 billion international sovereign bond maturing in July. Sri Lanka's economy is currently experiencing perhaps the worst foreign - currency crisis, which is insufficient to import basic products, meals, and medication (Amarasinghe, 2022). With an annual growth rate of 3.7%, Sri Lanka's economy's growth slowed down to 1.8% in the fourth quarter of FY2021-22. This is far less than the Central Bank of Sri Lanka's predicted growth of 5% (Central Bank of Sri Lanka, 2022b).

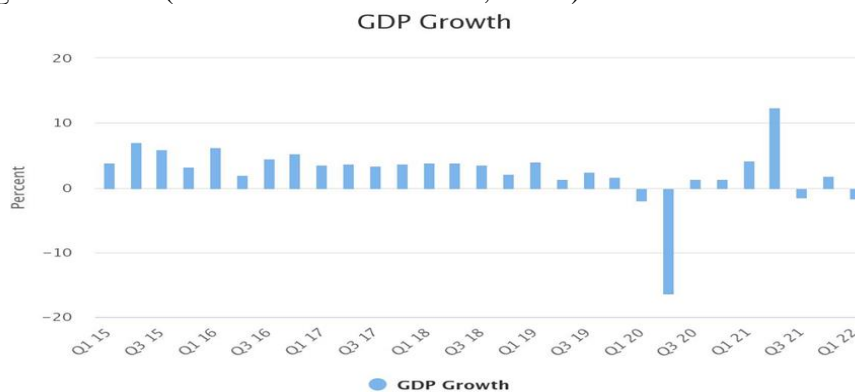


Figure 1. Growth rate in Sri Lanka

According to the World Bank data, in 2021 Sri Lanka GDP was around 84.52 billion USD. Sri Lanka's GDP shares 0.02 percent of the global economy (World Bank, 2022). GDP in 2018 increased by 0.61% from the previous year to 87.96 billion USD and in 2019 it was recorded \$83.90 billion USD, a decrease of 4.62% from 2018. GDP fell by 3.5% from 2019 to 80.97 billion USD in 2020, and it will rise by 4.38% from 2020 to 2021 (MacroTrends, 2022). The Sri Lankan economic crisis has wreaked disaster on the local construction industry and impacted the QSs who work in it. Historically, the construction industry contributed an average of 8-10% to a country's GDP. In 2019 and 2020, the contribution to GDP was only 7.4% and 6.2%, respectively (Wijetane, 2022a). Many suppliers of construction materials have experienced exceptional price incensement in recent years, with the Sri Lankan rupee's free float, the USD/LKR exchange rate has now risen to Rs.360.25. Which was Rs.186.40 in December 2020 and Rs.203.00 in December 2021, respectively (Central Bank of Sri Lanka, 2022a).The construction industry is now experiencing a wide range of issues because of the present economic climate, many of which can only be resolved by state-level action. Increasing material costs, payment delays, stopped government projects, difficulties importing commodities, and increased interest rates are the main problems the sector is now experiencing (Soyza, 2022).

Ongoing projects cannot be completed because of the high rise in the cost of construction materials due to the rising dollar rate and inflation rates. Some suppliers are also taking advantage of this circumstance by raising their margins. The majority of SOEs (State Owned Enterprises) are not adhering to the 20% price increase that the cabinet also permitted. Table 1 below illustrates how quickly building materials have increased during the previous two years (Wijetane, 2022b).

Table 1. Price Increase of Construction Materials

Material	Dec 2020 (Rs)	Dec 2021 (Rs)	19.04.2022 (Rs)	% Increase
Cement per 50kg Bag	850.00	1750.00	2175.00	155.9
Rebar per M. Ton	165,000.00	250,000.00	595,000.00	260.6
Structural Steel per M. Ton	170,000.00	330,000.00	750,000.00	341.2
0.47mm Zn-Al Roof Sheet per m	1522.00	2,802.05	4,500.00	195.7
Asbestos Roof Sheet per m	846.55	1,127.50	1,711.65	102.2

Payments are delayed while customers try to stabilize their financial situation. Overdue payments in the road, construction, and water supply sectors are thought to reach more than Rs. 100 billion. The gazette has now ceased all state-sponsored government initiatives in an effort to lessen its financial burden. This contains payments from government projects totaling billions of rupees. Due to the paucity of dollars in the local banking sector, the dollar crisis has made it all but impossible to buy the necessary commodities and supplies. When the dollar was floated in an unregulated way, several corporations who had to wait 120 days (about 4 months) after opening Letter of Credits had to endure painful losses. The central bank's high interest rates have also diminished any chances of acquiring new projects. Over 100,000 jobs would be lost because of the current economic crisis, according to the Chamber of Construction Industry of Sri Lanka (CCI), the top representing organization for all those working in the construction sector (Wijetane, 2022b).

The growth of the quantity surveyor profession has faced countless obstacles during this period. It has developed and weathered the storms to the point that it is now a renowned professional in the Construction sector. Quantity surveyor (QS) is the one who estimates the project costs to provide project owners with the greatest value possible. They make sure that construction activities which carried out in a way to meet client's expectations (Wao, 2015).

Quantity surveyors frequently collaborate on projects with other stakeholders including architects, engineers, project owners, government authorities, insurance providers, and contractors. However, given that the construction business originally emerged in the 1820s, the QS positions have greatly altered through time to accommodate the sector's evolving nature. This adjustment was made in part to fulfill the clients' constantly changing requirements and to outcompete rival construction industry experts like architects and engineers (Wao, 2015). The impacts of the current economic crisis were noticeable in the

quantity surveying profession in terms of job orders and development, just like they were in other professions in the construction sector.

The aim of this research is to evaluate the impact of the current economic crisis in Sri Lanka on Quantity Surveying profession and the objectives of the study are identified as:

1. To explore the current economic crisis in Sri Lanka and its impact on the local construction industry.
2. To identify the prevailing professional roles of quantity surveying professionals in the local construction industry.
3. To explore the challenges faced by quantity surveying professionals in the local construction industry due to prevailing economic crisis.
4. To propose recommendations and suitable strategies for them to successfully face the prevailing economic crisis in Sri Lanka.

2 RESEARCH METHODOLOGY

With the conclusion of a comprehensive literature survey to achieve the first objective of the study, semi structured interviews were used to identify the problems QSs faced during the current economic crisis in Sri Lanka. Semi-structured interviews offer a flexible advantage over structured interviews and are more formal than unstructured interviews. Interviews that are semi-structured and involve a questionnaire are more effective and enable interviewers to formally begin the interview. Thirty (30) Quantity surveying professionals were selected on a random basis to collect the data as there was very few literature related to the current economic crisis. During the crisis, the lack of fuel led to reduced or limited transport facilities and increased transportation costs, which make physical interviews an unviable option. Therefore, interviews were planned through online platforms. Prevailing professional roles of QSs in the local construction industry, and the challenges faced by QSs in the local construction industry due to the economic crisis were determined by conducting the semi structured, in-depth interviews.

In qualitative research, it might be challenging to analyze vast amounts of data. In this backdrop, thematic analysis offers simple and convenient options for data analysis. The data is divided into various data sets using thematic analysis. Due to these reasons thematic analysis was used to analyze the data which are collected through semi structured interviews. Results obtained from in-depth interviews were analyzed using thematic analysis to get the final output as a framework for evaluate the impact of the current economic crisis in Sri Lanka on Quantity Surveyors.

3 DATA COLLECTION AND ANALYSIS

3.1 Respondent's Profile

Interviews were conducted among Sri Lankan QSs who are in consultancy organizations and contractor organizations. Thirty (30) semi-structured interviews were carried out in terms of data gathering. The respondents' details were gathered through the first section of the semi-structured interview guideline. The summarized composition of respondent's profile is presented in Table 2.

Table 2. The Composition of the Respondents

Respondents (R)	Organization type	position	Working experience
R3,R5,R6,R8,R10,R12,R21,R22	Building Construction	Contractor QS	1 - 5
R1,R2,R7,R15,R27	Building Construction	Contractor QS	6 - 10
R9,R11	Mechanical Ventilation and Air Conditioning (MVAC)	Contractor QS	1 - 5
R20	Water Supply and Sewerage Construction	Contractor QS	11<
R4	Water Supply and Sewerage Construction	Contractor QS	11<

R13,R14,R23,R24,R25,R26	Consultancy organization	Consultant QS	1 - 5
R16,R28,R30	Consultancy organization	Consultant QS	6 - 10
R17,R18,R19,R29	Consultancy organization	Consultant QS	11<

Respondents were categorized according to their job role as shown in figure 2. The sample contained 57% of respondents who were contractor QSs and 43% of respondents who were consultant QSs.

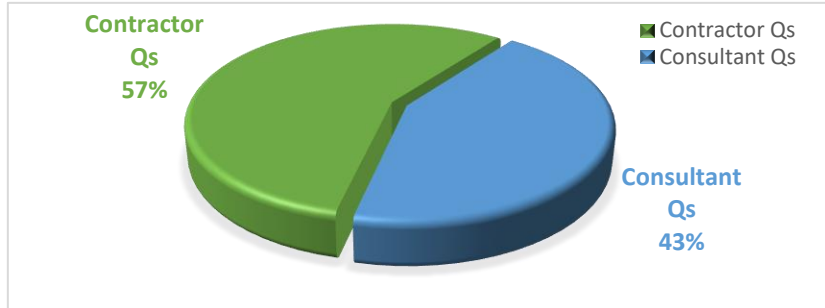


Figure 2. Type of respondent

Among the 30 respondents, there were three categories according to the respondents' experience. The three categories of QSs are those who have worked in the construction industry for 1-5 years (Junior level QSS), 6-10 years (middle level QSs), and more than 11 years (Senior level QSs). Figure 3 shows the experiences of the respondents.

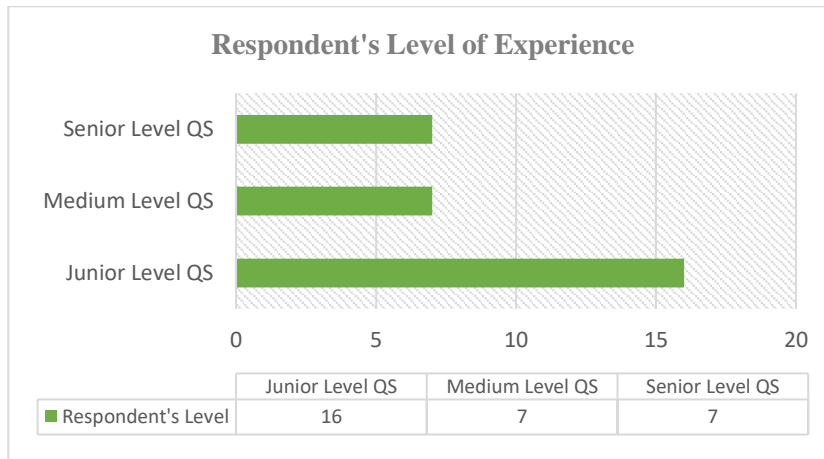


Figure 3. Respondent's level of experience

3.2 Thematic Analysis

The thematic analysis method is used to analyze the data gathered from semi-structured interviews.

3.2.1 Theme 1 - Impact local construction industry

Data gathered through semi-structured interviews with QSs revealed that the long-term deteriorating economic conditions were responsible for the decline in the construction sector. The main reasons for the economic contraction can be attributed to seven decades of indecisive political leadership and decision-making lapses fueled by corruption and fraud. Also, reasons such as excessive and wasteful spending, and import-based lifestyles of powerful society clusters as well as loss making state enterprises, influenced the economic crisis in the long run. R4 stated that *“it is a manmade crisis that occurred due to years of mismanagement of the imprudent political leadership for more than 7 decades led by corruption and fraud. Also, the government officials who are taking irresponsible decisions are also major stakeholders in the crisis.”*

Irresponsible decisions of the government on reduction of VAT (Value Added Tax) and other taxation, reduction of government revenue and increase in expenditure, central bank’s money printing to cover the budget deficit, external borrowings at high-interest rates, short-sighted decisions such as investing in projects that do not directly generate enough revenue, led the country to be rapidly dragged into the current economic crisis. This was admitted by R2, R4, R5, R9, R21, and R24.

R7, R14, R22, R26, R28, and R29 respondents revealed due to the lack of sustainable spending lead the country's dire financial situation and related problems, many sectors have become vulnerable to crisis situations. Although every country has suffered some setbacks due to the Covid - 19, the economic crisis has affected Sri Lanka more. As the reason for that was the Easter bomb attack, wrong decisions of the government, the ban on the fertilizer imports, the lack of foreign reserves, and the unprecedented Chinese intervention in the development sector could be highlighted. In the face of any economic crisis, the construction sector is the first to be affected in developing countries. Government, as well as private investors, have stopped investing in development projects. During the crisis, focus of all parties was on daily essentials such as medicine, fuel, and energy, hence attention on the construction sector has decreased.

Further R1 illustrated his opinion as *“due to the economic crisis, poverty increased and due to insufficient dollar income, the price of every product began to rise. Every item went up in price by 50%. Because of that, the existence of the construction industry has been affected. In the case of fluctuating prices of raw materials, a shortage of raw materials was evidenced. Due to this, the existence of the construction sector was hampered.”*

Also, R12 and R25 revealed that along with the economic crisis, there was a shortage of energy. Transport facilities were hampered due to fuel shortages, project delays, extended time demands like EOT, material wastage, etc., and R17 stated that *“through this, not only small builders but also the whole construction industry landscape started to change.”*

R23 reported that *“For example, the current economic crisis is more destructive than the economic depression of the 1930s. About seventy percent of the projects in the construction sector have been stopped due to this crisis.”* R27 reported that *“A few years ago, the contribution of the construction sector to the gross domestic product was between 8% - 10% percent, but now it has collapsed to 6% due to the economic crisis.”*

When the construction sector collapses, job opportunities are reduced and thus unemployment increases. Accordingly, the economic crisis has individually and collectively affected all parties involved in the construction industry. Also, the job market competition increases in the construction industry, and new graduates as well as junior professionals with less experience lose their place in the construction industry. The construction sector is also affected by actions such as increased labor mobility. This was admitted by R3, R6, R10, R11, R15, R16, R18, R19, R20, and R30.

Some statements of respondents are stated as follows.

R3	It is a very devastating condition for the construction industry in which most of the employees have been losing their jobs due to the non-continuity of construction projects.
R6	The economic crisis has created the worst situation for the construction industry. Many employees are facing unemployment and also industry is struggling to do their construction with high prices/rates of material, workmanship, and plant.
R10	Material shortage, price fluctuation, fuel shortage are evident and etc. due to this the construction industry is facing lot of problems. Also, the competitiveness of construction-related jobs has increased.
R11	The construction industry has been greatly affected by the Sri Lankan current economic crisis. Fresh graduates and junior professionals are more affected by the decline of the construction industry.
R19	The present crisis has arisen due to reasons like the Easter bomb attack, covid-19, and foreign reserve shortage. Due to problems such as material shortage, material price fluctuation, and labor rate increase, the construction industry suffered a setback.

3.2.2 Theme 2 – Impact to the Quantity Surveyors

Many respondents admitted that while the current economic crisis has severely affected the construction industry, it has also affected Quantity Surveyors. Its effect on the Qs has both advantages and disadvantages. According to the data obtained from the questionnaire survey, great disadvantages have happened to the Qs and in some way, favorable conditions are also highlighted.

Advantages / Opportunities for Quantity Surveyors

R27 stated that *“providing an opportunity for foreigners to invest in the construction sector due to the inability of local investors to invest in projects in the construction sector as well as the suspension of development projects by the government.”* And the government allows them to operate without any hindrance. Through that, Quantity Surveyors can easily connect with foreign technology and gather new knowledge. Further, contractors are motivated to carry out projects in foreign countries and that would open them up for new technologies and ability to deal with higher industry standards. This was admitted by R1 and R4.

R3, R5, R21, R24, and R26 respondents revealed that in the face of the crisis, about 50% of the Quantity Surveyors lost their job opportunities and due to job uncertainty, they began to pay attention to foreign job opportunities. The Qs would get a higher salary as well as new technical experience, through this.

R4 stated that *“In order to achieve maximum productivity in the crisis, contractors began to pay more attention to budget control and monitoring, minimizing wastage of raw materials and general planning to prevent wastage. In this backdrop, Quantity Surveyors are essential for solving all the financial problems in contract administration and projects, and overall job opportunities for Quantity Surveyors have increased.”* R8 also supported R4’s opinion as *“The QS were the main character who must address all the financial issues in the sites and the financial background of the company must identified and revealed. Further, QS got the opportunity to act as the contract administrator in the construction companies”*

R2 and R7 revealed that due to the prevailing economic crisis, more opportunities prevailed for an experienced Quantity Surveyor in hiring for jobs. Surveyors with experience in constituting claims (especially fluctuation claims) and handling contracts (contract administration) are eligible for better employment opportunities.

R11 reported that *“the fuel shortage has severely affected the construction sector, where more attention has been paid to hire officials who are at a minimum distance from the project. As a result, there were constant job opportunities within easy reach of the workplace. And as a Quantity Surveyor, you don't have to put in a lot of effort to find labors. As unemployment has reached a high level due to the economic crisis, labor has been readily available. And the labor shortage has decreased.”*

Also, due to the shortage of fuel caused by the crisis, companies were motivated to accept e-tenders. Further, the introduction of online programs such as online bid submission and e-procurement, Qs got more advantages. It also saved time and transportation costs and since the restrictions on import goods prevail as a solution to the crisis, the price of paper started to rise rapidly. As a result, more space was given to the use of software than the use of paper. At the same time, cost and time were saved, and QS got the opportunity to gather more knowledge about software like MS Project, costX, and Navisworks. This was admitted by R6, R9, R20, R22, and R29.

R25 stated that although they did not have a strong understanding of economic crisis before, they gained an understanding of various aspects of this crisis. Also, the economic crisis led to a better understanding of price formulas, price fluctuations, and project cost control. This was also admitted by R13, R17, R20, and R25.

Although the data reveals beneficial aspects such as gaining new knowledge and getting foreign employment opportunities for Qs, it is evidenced that some Quantity Surveyors do not have any favorable situation due to the crisis. R5, R10, R12, R14, R15, R16, R18, R23, and R28 revealed that there were no any advantages or opportunities due to the current economic crisis.

Some statements of respondents are stated as follows.

R6	Online working platform have been created to avoid travelling charges. (Ex; Online bid submission).
R8	The Qs were the main character who must address all the economic issues on the sites and the economic background of the company must be identified and revealed. Further, QS got the opportunity to act as the contract administrator in the construction companies.
R17	The need for senior Quantity Surveyors has increased because of the crisis, which necessitates their experience.
R20	Got more knowledge about the price fluctuation side.
R24	Got some Knowledge about software.

Disadvantages / Challenges faced by Quantity Surveyors

10 out of 30 respondents highlighted that due to the current economic crisis, the import of goods was restricted, and the import of certain goods was banned. As a result, there was a shortage of raw materials and VAT has increased to 12%-15%. Inflation has also increased and thereby the prices of materials increased by 3%-4%. The Quantity Surveyors found it difficult to maintain a healthy cash flow in construction projects due to the practical inconsistency of applying price escalation formulas in the crisis.

Accordingly, it has become difficult to build up tender and estimate pricing. And it is difficult for the contractor to offer a competitive price as tenderers should include all risks with their price. Also, due to the increase in daily expenses, the prices of the subcontractors will increase. Also due to reasons such as the increase in wages of the workers, the price of the project will in turn increase more than the estimated price. This makes it difficult to select raw materials before starting the project. This was admitted by R4, R6, R8, R18, R19, R20, and R30.

R22 stated that *“due to fluctuating prices of raw materials, raw material suppliers provide their price lists only for two days. Therefore, finding suppliers is also difficult.”*

R5, R6, R7, R4, R11, R12, R13, R14, and R17 revealed that the contractors are unable to carry out construction work due to unexpected price fluctuations. It is not a convenient task to approve payments related to the changes made in the project due to the increase in the prevailing price over the agreed price. Accordingly, it becomes difficult for employers to pay money. Thus, the employer compels to stop the project due to a lack of money. Project abandonment would lead to wastage of raw materials and the government of Sri Lanka also declared abandonment of all government led constructions. The new projects that will come out are very distant and many of the existing projects have been suspended or stopped. Hence routine tasks for Quantity Surveyors like quantity surveying, billing, BOQ preparation, tendering, etc. are stopped. This leads to high levels of unemployment among Quantity Surveyors.

R10 stated that *“due to the high price of software, it is not possible to use the software and even if tenders are made for foreign projects, the possibility of malpractices are high. And due to the shortage of dollars and import restrictions, only minor constructions were done since it is impossible to buy bulk stock.”*

R15 reported that *“due to the current economic crisis, the government is unable to pay about one hundred billion for the construction contracts that have ended. This has become a major cash flow problem in the local construction industry and has led to the bankruptcy of many small contractors. Therefore, this affects Quantity Surveyors working with small contractors.”*

Employers are unable to restart the projects. Also, employers show reluctance and fear to start projects due to the crisis. Private entities are not interested in undertaking construction projects as the projects incur losses. Hence, Quantity Surveyors do not have many job opportunities in the private sector. Also, Quantity Surveyors will lose jobs due to the stoppage of government projects. Due to 25% increase in the project cost, Quantity Surveyors' remuneration has decreased by 50%. Since there is a decrease in the number of employees, the amount of work per person has increased. And benefits such as overtime and bonus were lost. In the wake of this crisis, there was a shortage of projects due to which mainly the jobs of Quantity Surveyors became uncertain and there was no job security. This was admitted by 13 respondents in the sample.

Some statements of respondents are stated as follows.

R1	Giving an accurate estimate is very difficult in this period due to day-to-day increase in material prices.
R6	Unemployment risk in job, high material prices and price variations create cost variations in BOQs and cash flows, lack of imported materials, high overhead cost, high transportation cost, high charges for VAT and clearances.
R9	Import ban (materials that are not made locally), Difficult to maintain project cash flow.
R11	Payments are not approved when there are variations in a project as prices have increased more than the agreed rates.
R14	Since the government is not allocating funds for the construction projects, the projects had to be stopped and the staff who were working on the project lost their jobs.
R22	The prices of construction materials have become 3- 4 times higher than they were before. Due to this, even a small construction task is too expensive now. Most Sri Lankan people don't have the financial capacity to afford new construction projects.
R29	The fuel shortage affected the transportation of materials. When the materials cannot be transported at the right time, the project is delayed. Also, the project cost increases due to material price fluctuation.

22 out of the 30 Qs interviewed, and there will be no opportunities for QS professionals in the local construction industry in the future (within the next 3 – 5-year time period). R23 stated that “I think in 3 – 5 years construction industry contraction would be approximately at 60 % in total. Local and international investors take more risk in investing their money and they will take their investment to other countries. Skill and un-skill labor shortages would impact the construction industry further. Contractors make their BOQs and payment including high risk and tax, which will directly affect the project Sum. About 50% of contractors stop their business and the unemployed rate increase in the construction industry.”

Only 8 Qs thought a good situation will arise for the construction industry and again QS job role will be in demand within 3 – 5 years.

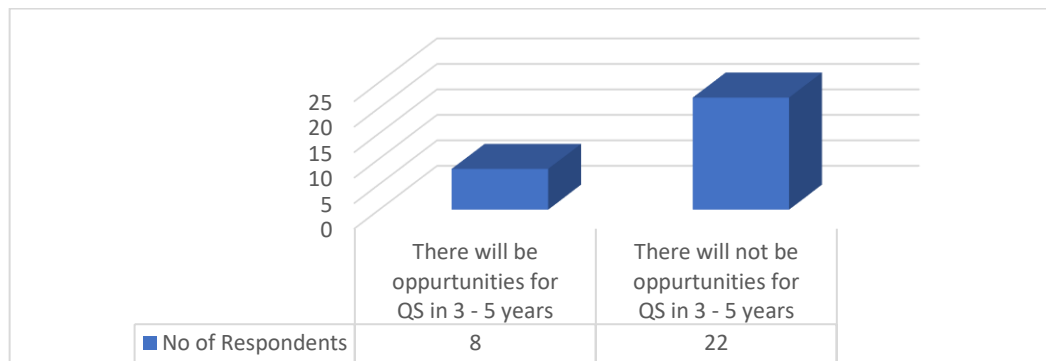


Figure 4. Respondent's opinion

3.2.3 Theme 3 – Strategies

Strategies propose for the construction industry

The construction sector has been severely affected by the current economic crisis and the measures to be implemented in the construction sector to successfully face these challenges are clear from the data obtained through the survey.

R5 and R26 revealed that for this, long-term and short-term planning should be implemented through a system first. Available resources should be deployed for projects that can be profitable very quickly and resources should be used sustainably. Also, attention should be increased to carry out projects faster. And actions such as identifying risks and preparing the risk matrix, changing procurement methods should be addressed.

Also, the construction sector should provide support and space for short-term careers or referrals for foreign jobs. And by getting foreign projects, the company and employees are secured. Policies and technology should be improved so that more foreign investments can be obtained. The impact of the crisis on the company can be reduced by building an agreement between the two parties to make payments in foreign currency for foreign investment projects. Attention should be paid to foreign countries that can expand the construction industry in this way.

R4 stated that *“one policy that can be used to increase the availability of foreign-funded construction projects is to forecast the fuel requirements of the foreign-invested project during the crisis and maintain CEPETCO/IOC capital dollar reserves to ensure a constant supply for each contract only.”*

According to the point of view of R19, it is stated *“Banks should offer a special rate of interest for construction projects with further government intervention. Also, while getting a loan, you should win the creditor’s trust by presenting an overall repayment plan.”*

R4 and R28 revealed that enter into an agreement with the Contractors Union. Government should resort to the conversion of outstanding payments into treasury bonds and advance payment of fixed interest for fixed periods. This will happen until the government receives financial assistance to cover the payments in full. Therefore, the contractors will get some return for their retention money and the government will get relief due to a reduction in its existing payment obligations.

Also, local construction projects which are making losses daily should be stopped until the country recovers. And efforts should be made to restart large-scale contracts with funds that directly generate revenue for the collapsing economy. Foreign, as well as local investments, should be encouraged for the same.

Efforts should be made to reduce the general expenses incurred for the project. Also, methods should be used to prevent the wastage of materials. Raw material wastage can be avoided by manufacturing according to standard measurements and standards of materials. This was admitted by R8, R9, and R19.

In the interviews, 13 respondents described that reserve a dollar payment component from all upcoming foreign-funded projects to import key construction materials. Similarly, tax exemption on such imports up to a specified period to further streamline the construction costs of the domestic industry. If the material cannot be imported, alternative raw materials should be produced in Sri Lanka, and local raw materials should be used as much as possible. For that, local methods of continuous supply of raw materials should be sought. And by applying a control price for raw materials, the government can control the fluctuation of raw material prices. The price fluctuation formula should be modified to match the rate of the current price change by removing import restrictions on essential raw materials.

R3 and R6 revealed that bringing laws regarding timely payments to contractors, privatizing them, and setting up online work environments as much as possible also contribute to reduce the impact of the economic crisis on the construction industry.

R12 stated that *“In this way, the essential basic factor to build up the construction industry by accomplishing every step is to have strong management. Only highly experienced and skilled staff should be used to carry out the projects, and proper understanding should be given to those engaged in the construction industry by conducting workshops and training courses on the current economic crisis in the country.”*

Some statements of respondents are stated as follows.

R1	Trying to get foreign projects might be a good strategy to secure the company and employees.
R4	Expanding Construction industry to possible overseas countries. (Ex. – in Africa, Asia)
R7	Compromising with the Contractor’s association and convert unpaid payments by the Government as treasury bonds and conduct due interest in advance for certain period. This is until the government gets financial help to fully settle the payments. The Contractor’s will get some outcome for their withhold money to survive themselves and the government will get a relief due to reducing its immediate/urgent payment liability.
R9	To solve the fuel problem, you can get the relevant permission and get the amount of fuel per fuel quota.

R11	If import materials restrictions are placed, local substitutes should be introduced.
R22	We should encourage people to invest in projects. One strategy is that we can go for alternative construction methods where they cost less. As an example, currently, contractors are encouraging the use of cement rendering for floor finishing rather than tiling. Because currently there is a scarcity of tiles in Sri Lanka and tile prices are higher than cement rendering.
R30	Relevant regular bodies should work in such a way that the construction industry is protected.

Strategies propose for the Quantity Surveyors

When the economic crisis had a strong impact on the construction industry, Qs were also affected by it, and the way to act by them in the construction industry can be identified by data analysis.

The main cause of the economic crisis is the lack of foreign reserves. Due to the current crisis in the country, more attention should be paid to foreign investment and foreign employment opportunities to successfully face the challenges faced by Quantity Surveyors. Quantity surveyors should be interested in jobs in foreign countries as well as bidding for foreign projects. To get local as well as foreign investments, we should work diligently in this regard. This was admitted by R1, R5, and R9.

R26 Stated *“when tendering domestic or foreign investments, the value should be increased for price uncertainty movements and price fluctuation should be introduced for all contracts, and for that, prices should be assumed based on price fluctuations.”*

According to the point of view of R3, it is stated *“Quantity Surveyors should try their best to keep up-to-date on the new rules emphasized by the government regarding the construction industry and minimize losses by using variable order. Also, Quantity Surveyors should learn about various aspects of the construction industry.”* This was also admitted by R14 and R29.

R5, R7, R12, and R22 revealed that must be aware of new technology and focus on global innovations. Also, Quantity Surveyors need to develop knowledge of contract administration and its entitlements, which are in good demand in the construction market. Attention should be paid to developing analytical skills with proper frequency tools which are important for this crisis. As there should be a good understanding of the crisis, measures such as participation in related workshops should be resorted to. Also, be aware of less expensive alternative construction measures and alternative construction materials.

R9, R11, and R15 reported that before taking up a project, Qs should ensure that their company has the capacity to undertake the project. Also, while choosing subcontractors, one should be careful not only about the prices but also about their performance and capacity. And for every raw material that needs to be bought, the price should be revised, and the purchase should be made. Methods should be employed to avoid the wastage of raw materials and efforts should be made to expedite the project. That is, when the project is completed quickly, one does not have to face problems such as the increase in the price of raw materials. Furthermore, by estimating the number of raw materials for the relevant phase of the construction project and transporting them at the same time, it is possible to reduce transportation costs and time.

Efforts should be made to manage the waste of raw materials effectively and efficiently and when compared to other industries, the amount of waste generated in the construction sector is large, and therefore, as Quantity Surveyors, waste should be minimized. Also updating with prices of upcoming construction materials on daily basis as Quantity Surveyor in pricing and it is better to do projects for less profit than not to do projects. This was revealed by R22 and R26.

R30 illustrated his opinion that *“In carrying out projects in this way, the suppliers should be given an order of a certain quantity of materials and get a fixed cost for the raw materials, and subcontractors and raw material suppliers should be followed up on a regular basis. Maintaining project cash flow is a key task and daily reports must be maintained and payments must be monitored cooperate with all parties involved in the business and ensure that parties are promptly informed of changes”*

R13 stated, *“IQSSL institutes should conduct workshops on how to deal with unexpected situations and major economic crises so that the Quantity Surveyor should be fully aware of this and thus be able to overcome the challenges and operate in such a crisis situation.”*

Some statements of respondents are stated as follows.

R1	Increasing the price contingency component of new tenders.
R2	Government intervention is required to solve the current crisis in the construction field and is required to set cost boundaries for construction materials to control monopolistic suppliers. Need to lift import sanctions on construction materials.
R5	Developing professional skills to suit the country's situation.
R6	Seeking projects abroad for consultancy and outsourcing work and doing freelance work for foreign projects.
R7	QS Professionals must improve their knowledge in Contract Administration and preparation of Contractual claims for which the market has a better demand.
R10	Having a great understanding of every side of the construction sector.
R24	Use new software and technology.

4 CONCLUSION

The first objective, which was to explore current economic crisis of Sri Lanka and its impact on the local construction industry, was achieved through a comprehensive literature survey. The main reasons for the contracting economy can be attributed to seven decades of indecisive political leadership and decision-making lapses fueled by corruption and fraud. Due to the lack of sustainable spending on the country's financial situation and related problems, many sectors have become vulnerable to the crisis. Problems such as construction material price fluctuations, project delays, EOT (extension of time) claims, fuel shortage, transportation problems, materials wastage, and labor rate increase have hampered the growth of the construction industry. The second and the third objectives were achieved through semi-structured interviews. Quantity Surveyor was historically the cost and financial accountant for the construction industry, but the traditional role of Quantity Surveyors has developed into automated measurement and quantification, environmental and sustainability analysis, advice on information and communications technology, taxation and investment advice relating to construction projects, supply chain management, facilities management, legal services, quality management, niche markets etc. There are many alternatives exists at present. The aim of the research is to explore the effect of the current economic crisis on Quantity Surveyors. From the interviews conducted at the data collection stage, many obstacles were found which affected them. According to the data analysis: job uncertainty, job losses, lack of imported materials, difficulty in giving an accurate estimate due to day to day increase in material prices, inability to give a competitive price for tenders, high material prices and price variations create cost variations in BOQs and project cash flows, high overhead cost, high transportation cost, high charges for VAT and clearances, difficulty in maintaining the project cash flow, inconclusive payment process due to variations in a project, frozen bonuses and overtime payments, disappearance of extra private sector jobs are the main challenges which are faced by the Quantity Surveyors due to current economic crisis. To overcome those obstacles, respondents suggested what they are doing at present and what needs to be done in the future. Increasing the price contingency component of new tenders, introducing price escalation for all tenders and for awarded contracts, increasing the flexibility of contractual conditions related to claiming additional costs un-covered by price fluctuation payments until designated period of time in local industry, developing professional skills to suit the country's situation, being a seeker of modern knowledge, focusing on global innovations, trying to engage with local and foreign projects through information and communication technology., doing freelance works for foreign projects, payments should be monitored and project cash flow should be maintained regularly, predicting the rate using price escalation formulas, were identified as proposed strategies. As a Quantity Surveyor, the requirement to learn every side of the construction industry was also among them. Hence the study was able to achieve its fourth objective as well.

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