

REVIEW OF THE BUILDING SCHEDULE OF RATES (BSR) FOR WORK NORMS

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Abstract - The Building Schedule of Rates (BSR) for standard work norms should be reviewed due to some technical problems raised in the current construction industry. It was found that there are some work norms that have not been recognized in the BSR. The role of a quantity surveyor has been widely recognized through the BOQ preparation. Therefore, the trust on the duty of the quantity surveyor is understated due to the rates which are not allocated in the BSR. As the methodology, an expert analysis was done to find the new variables for work norms which should be included in the BSR. Around 30 professional quantity surveyors have been interviewed to get the opinion regarding the missing variables. Most of the respondents said that the BSR rates should be changed according to the changes available in the market. The given rates are somewhat old, and the new items have not been identified. Specially, the modern technology introduces new materials and methods for the building works which have been developed after the development of the existing BSR rates. According to their opinions, some of the rates for items can be identified indirectly using some of the rates given in BSR. But, to get the real picture, the BSR standard should be updated.

Keywords: Review, BSR, Work Norms

I. INTRODUCTION

Construction industry plays a major role In Sri Lankan economy. The construction sector was continuously growing at high rate during the previous years. Materials, plant and labour components are the main inputs to the construction sector. Planning, organizing, directing and controlling of material, plant and labour components are the main factors to a successful project. To assist these functions, the standard norms were developed time to time. Today, the development of the modern technology,

work norms to the construction industry are to be updated. In Sri Lanka, standard work norms are available and it is called Building Schedule of Rates (BSR). It is very helpful in estimating different parameters.

The Building Schedule of Rates (BSR) is developed, mainly based on work standards generally accepted for building construction work with eight hour labour input. The rates are build- up, based on pricing and engineering estimate for the construction maintenance or addition or improvement to a building. The Rates include Overhead and Profit Margin as per their own norms, but general 15%.

BSR analysed a specific rate for many building works. In the construction site, the rates are analyse by examined the materials consumption and labour involvements in two different selected sites and all the data were recorded on daily basis according to the construction events. The experimental data were analysed by statistical techniques and compare with the BSR rates available up to date. But some of the rates are old and they are not updated to the current market price.

The BSR is directly incorporated for the preparation of BOQ. Because of the improper rate allocation, there will be a major deviation between actual cost and the BOQ price. And this, directly affects to the cost of the project. Therefore the reliance on the duty of quantity surveyor is understated due to the improper rates allocation as per given in BSR.

The main objective of this research is to find out the reasons for not identify a specific rate for the work norms mentioned before.

II. LITERATURE REVIEW

The Building Schedule of Rates (BSR) for building work norms should be reviewed due to some technical problems raised with the rates which are not allocated in the BSR. According to Cambridge English Dictionary, review defined as, “to think or talk about something again, in order to make changes to it or to make a decision about it”. So this research is aimed to find out the reasons for not analyse a specific rate in the BSR, for current building works.

According to SMM7(2017), “The Building Schedule of Rate is prepared based on work standards generally accepted for building construction work with 8 hour labour input. The item description of the BSR is recruited with a view to directly incorporated in to a BOQ, Which in turn will be used as a bidding document for measure and payable contracts along with specifications, drawing etc.” BSR rates are built-up, based on pricing and engineering estimate for the construction maintenance or addition or improvement to a building. BSR analysed a specific rate for many building works. But today, the development of modern technology, work norms are to be updated. The BSR is directly incorporated to the preparation of BOQ. Because of not analyse a specific rate to the current building works, quantity surveyors use various methods to calculate the rate. There will be a major deviation between actual cost and the BOQ price because of the improper rate allocation. And this is directly affects to the cost of the project. Therefore the reliance on the duty of quantity surveyor is understated. This is a major issue in current construction industry.

According to Construction Law, Chapter 1, section 1, “Construction work norms is defined as an aggregate of norms and regulations binding on all persons participating in construction that regulate construction and the operation of structures as well as explain construction terminology”.

This research is mainly focused on the current building works which haven't a specific rate in BSR. Specially, the modern technology introduces new materials and methods for the building materials which have been developed after the development of the existing BSR rates. So the BSR should be updated for the current market.

According to Bhutan Schedule of Rate (BSR-2017), “The Bhutan Schedule of Rates are prepared and published

primarily as a tool to assist in the estimation of project cost. Due to difficulty in obtaining comprehensive and accurate rates from base towns and associated complexity in their analysis, the BSR reflects only suggestive averages and not accurate current market rates. Materials and labour rates also fluctuate frequently, and by the time of the publication of this book, many rates would have already changed”. So by this evident that there are various reasons for not identifies a specific rate for the new materials. And according to the author, the Bhutan Schedule of Rates reflects only suggestive averages and they are not accurate current market rates. In Sri Lankan construction industry, standard work norms are available and it called Building Schedule of Rates (BSR). But it also not updated for the current market price.

According to Work norm analysis for medium scale building project by U.K.D.L.T Udawatta, department of civil engineering, University of Moratuwa (2010) found that the actual material consumption is relatively high comparing to the standard BSR value which were previously developed. It is evident that there is a major deviation between actual cost and the BOQ price. It also directly affect to the total cost of the construction project. The new variables of the modern market should be validated and recognized by the BSR. If not, it directly affects to the preparation of BOQ.

According to, Causes of construction delay traditional contract (2002) by Abdulla M., Hussien T, Many projects experienced extensive delays and thereby exceed initial time and cost estimate. There are many factors affect to delay a project such as ;Financing and payments, labour productivity, slow decision making, improper planning etc . By referring the financing and payment factor of this research can get some additional information to this study. If the cost of the tender is too high, the client has to delay or re-design the project moreover cost of the BOQ and the real cost of the project has a major deviation, then they have to delay or re-design the project. BSR rates may affect to the cost of the tender. During the tender stage, the construction companies in the private sector use rates which are relative to them. Because of not having a standard method to analyse the rates for certain building works, the total cost of the project may deviated.

III. METHODOLOGY

Structured interviews were conducted as the mode of data collection technique to gather data for the study concerned. The interview was conducted with a randomly

selected, around 30 professional quantity surveyors, involved in current construction industry from different parts of the country in Sri Lanka.

BSR analysed a specific rate for many building works, but it is not updated for the new items, arrived after the development of the modern technology. When studying the BSR, we found out that there are some building works that haven't a specific rate in BSR. From that building works, we do our research based on the aluminium ceilings. The collection of data was done by preparing a list of simple questions based on one selected building work; aluminium ceilings. First off, the first question was raise for the interviewers to get to know about, whether this building work (mentioned before) have a specific rate in the BSR or not. And the rest of the answers are depending on the answer give to this question. Various methods are use in construction sector to analyse a rate for the works that haven't a specific rate in the BSR. This interview helps to get a clear idea about these methods. Because of not analyse a specific rate for the current work norms in the BSR, quantity surveyors use various methods to analyse the rates. The next question consider about the impact to the preparation of BOQ by using various methods to allocate the rate. Because of the improper rate allocation, there will be a major deviation between actual cost and the BOQ price. The role of the quantity surveyor has been widely recognized through the BOQ preparation. So due to the improper rate allocation, the trust on the duty of quantity surveyor is questionable, because the BSR is directly incorporated for the preparation of BOQ.

This study is aimed to find out the reasons for not analyse a specific rate for the new variables by conducting interviews with the professional quantity surveyors involved in current building construction industry. To overcome this issue, the findings of this research are really helpful.

After examined the professional quantity surveyors, the data analysis were carried by using a grid table, and compared each and every answer with other. The analysed data will be represented by using a pie chart. Finally an overall conclusion made from the information gathered through the interview.

IV. ANALYSIS

According to the questionnaire and the referred details, there is no rate analyse for Aluminium ceilings in the BSR, published by the Building Department. But in modern construction field use aluminium ceilings. Most of the

professionals said that there are various methods use to analyse a rate for the aluminium ceilings in modern construction. Most of the professional quantity surveyors are analysed rates by using previously completed projects. Some of them use specialised quotations from sub contractors and also use current market rates for analyse a rate for the aluminium ceilings. They use various methods for analyse the rate for aluminium ceilings because it doesn't have a specific rate in BSR.

According to the questionnaire, it is evident that there are lot of reasons for not identify a specific rate in BSR to this work. According to their answers, timbers, asbestos ceilings were used in many years back, at that time aluminium ceilings were not available in the local market so they didn't have much knowledge about aluminium ceilings those days when preparing the BSR. Some respondents said that there are many types of aluminium ceilings available in market, so rates are depend on the type of the material(ex: powder coated, anodize etc) , type of finish, hanging type and hanging material. Some said that techniques, methodologies are changing time to time so it's difficult to analyse a special rate for this type of materials. Manufacturing, installation process are very complex in this type of materials so need skilled labours for this type of work. So they cannot identify an accurate price because of the complexity of the process. BSR rate analysed only for the basic items, for new items they should depend on this basic items and analyse a new rate. And also client requirements are changing day to day so cannot fix for the norms. Quality and nature vary from project to project.

Next query consider that, if it may be a problem to price the BOQ when there isn't a specific rate analyse for this material. Some respondents said that it may be a problem and some said no. According to the professionals who said that it may be a problem, the clients' requirements day to day change and it cannot fix for the norms specially materials and selected materials usage and required executions can't judge based on the requirements and design teams, design norms should vary. To making norms and collecting details not simple. When pricing BOQ needs additional time to develop all because studying details, collecting details, analysing are not easy. If there is a variation or an extra work in construction field, it may be a problem when analysing a special rate. Some respondents said that tender prices are vary because different contractors give different tender prices so they have to make construction descriptions, need to give approximate specifications and accurate price details, so the process is complex. If they

don't price the work correctly they may either lose the job at tendering, or if the tender awarded, they won't be able to have any profit. Some experts answer was that it doesn't mainly become a problem as they use specialized supplier rates to price these items. But if they don't send the quotations on time or fail to provide full price list, they will face difficulties. Furthermore when they fully depend on that external party they don't have a bench mark rate to evaluate the supplier rates. And also the aluminium works are not always is a work of sub-contractors.

According to the respondents, for the most commonly use brands and specifications, a standard rate analysis can be provided in the BSR. This standard rate analysis can be used as a bench mark rate and adjust accordingly with the relevant brands and specifications. Some respondents said that changing the BSR rates is not a solution for this problem because the market rate and requirements are varying time to time. When finding the solutions for this matter using the questionnaire, most of them said that BSR must be updated according to the current market rate, new modern technology or an equal quotation must be specified. Some professionals said that to give a price proposal for the building department, as a solution or they can develop pricing system with some hard work, such as collect all the details in manufacturing process and the installation and develop a detailed breakdown for the work with the market rates. Most accurate norms can be build up using historical data which was used in similar work in previous projects or can maintain update database of commonly used aluminium ceiling types from different suppliers. Some said that they can do a work study and build up a workable rate. So, many professional quantity surveyors gave various solutions for this matter. The analysed data is represented by the pie chart below; Figure.1



Figure.1 Reasons for not analyse a BSR rate

V. CONCLUSION

The Building Schedule of Rates (BSR) published by the Building Department, Sri Lanka for building work norms should be re-evaluated due to many technical problems which were raise in real world calculations. There are many variables in building works that have not been recognized in the BSR published by the building department. The BSR is directly incorporated for the preparation of BOQ. So because of the improper rate allocation, there will be a major deviation between actual cost and the BOQ price. This will directly affect to the cost of the project. Therefore the reliance on the duty of QS is understated due to the improper rate allocation as per given in the BSR.

The main objective of this research is to find out the reasons for not identifies a specific rate for this special works. So, structured interviews were conducted as the mode of data collection to gather data for the study concern. The interview was conducted with randomly selected professional Quantity Surveyors involved in current construction industry.

Considering the answers of the professional quantity surveyors, it is clear that there hasn't a specific rate analyse for the aluminium ceilings in the BSR published by the building department, but in the modern technology aluminium ceilings are using for the constructions. But there hasn't a specific rate analyse for aluminium ceilings so to get an accurate price rate for this item, they use various types of methods. Most of them use rate from previous completed projects and current market rates to give an accurate rate for the aluminium ceilings. From this research it is evident that there are various reasons for not identify a specific rate for the above item. Most of the respondents said that the market rate is change from time to time and the requirements of clients are vary from project to project. So it's difficult to get a specific rate for the special works and cannot fix for the norms. Especially materials and selected material usage and required execution can't judge. It will base on the requirements and the design teams design norms should vary. And when publishing the BSR, aluminium ceilings were not in the local market.

Most of the respondents said that because of not having a specific rate for this material, it will be a problem when pricing the BOQ. According to the professionals, to making norms and collecting details are not simple. When pricing the BOQ, needs additional time to develop all. Studying details, collecting details, analysing is not easy.

When available of norms, can save time within pricing BOQ but without all time people additional involvement make additional cost. So it may be a problem when there's not having a specific rate for this works when pricing the BOQ. Some obtain quotations from sub contractors and analyse a rate for this material. They said that it's not a problem when pricing the BOQ.

This research only considers about the Aluminium ceilings as the work, but the modern technology introduces many more new building works. So, each of the work needs to analyse a specific rate when preparing the BOQ. If not it directly affects to the quantity surveyors duty, so the reliance on the duty of the quantity surveyor is understated due to this matter. When considering the most of the respondents' answers, conclusion can be

made that the BSR should be update at least once a year and the updated BSR should have to use in the current construction industry.

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