

A SURVEY OF THE PERCEPTION OF QUANTITY SURVEYORS REGARDING TENDER-PRICE INDICES IN SOUTH AFRICA

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ABSTRACT

Different indices are encountered in the building industry for use by built environment professionals, such as input-price indices, output-price indices and seller's-price indices. Currently there is only one tender-price index (or output-price index) that is published on a regular basis in South Africa, through the University of Stellenbosch Bureau of Economic Research (BER) building cost index. This article is based on information gathered from two questionnaire surveys conducted among quantity surveyors in South Africa regarding their perception of tender-price indices (TPI) in South Africa. The research findings indicate that a TPI is an important tool for use by quantity surveying practices. One of the problems related to the accuracy of the BER index is the lack of information provided by quantity surveying practices. A suggested remedy for this problem can be the involvement of the ASAQS. There may be room for a new, alternative TPI, based on recent information, in the South African building industry.

Keywords: building industry, quantity surveying, tender-price index

1. INTRODUCTION

According to Seeley (1996), the labour and material content of every building differs and these cost variations must be taken into account when cost planning for buildings is done. The best way to adjust the available data is through the compilation of indices of building cost. One of the problems encountered in the literature is that different authors use different terminology to describe what essentially is the same concept. Fleming and Tysoe (1991) and Davis Langdon Management Consultancy (2008) for example, state that there are three main types of indices used in the construction industry, namely:

- Building cost indices
- Tender-price indices
- Output indices

In contrast Eurostat (2008) as well as Statistics Norway (2007) mention that construction price indices can be grouped into three main types:

- Input indices
- Output indices
- Seller's indices

To clarify these conflicting terms, Eurostat (2008) state that the terms “cost index” and “price index” should be considered from the point of view of a contractor. Each of these index types can be briefly described as follows:

Input-price index: Input price indices, also called construction cost indices (Asworth, 1991) are, according to Statistics Norway (2007), representative of the construction process inputs such as material, labour, machinery, transport, energy and other costs. Marx (2005) is of the opinion that such indices can be used to determine contract price adjustments after a tender has been awarded.

Output-price index: From the literature it is evident that tender price indices and output price indices are essentially the same concept. McCabe, O'Grady and Waller (2002) state that output price indices attempt to measure the total cost of construction of a completed structure in each location, meaning that these indices reflect the location conditions specific to each project. Marx (2005), states that the factors influencing such indices are the contractor's profit and overheads costs as well as competition in the tender market as this has an influence on the profit margin of tenders. Seeley (1996) define a tender-price index (TPI) to be an attempt to represent the level of prices agreed between clients and contractors.

Seller's-price index: This type of index is not much used in the South African building industry. According to Statistics Norway (2007), seller's-price indices include not only all the cost of the completed construction project such as all the cost of labour and materials paid to the contractor, but also the cost of land, direct and indirect selling expenses, finance costs, professional fees, VAT, as well as the seller's profit

Van der Walt (1992) stated that no officially published building cost related indices existed in South Africa until the 1960's. Some local quantity surveying firms developed their own indices; mostly by re-pricing existing bills of quantities, but these were never officially published.

Currently there is only one TPI that is published on a regular basis in South Africa, viz. the University of Stellenbosch Bureau of Economic Research's (BER) building cost index. This index was developed in the early 1960's for use by the then National Department of Public Works (DPW). The BER was looking for a deflator for building prices in the mid-1960's and, according to Kilian (1980), obtained permission from the DPW to take over this index.

Yu and Ive (2006) is of the opinion that that TPI's attempt to measure the inflation of the contract prices between clients and contractors for constructing new buildings. The four important uses of a TPI, as indicated by Yu and Ive (2006), are as follows:

- Deflation of building sector components of the nominal national product
- Capturing inflation in the building industry for assessments and forecasting of market conditions
- Updating historical cost data for cost planning and estimating
- International comparisons of the level and growth of price, output and productivity in building industries.

Because of the perceived importance of the use of especially TPI's in the building industry, a survey was conducted among quantity surveyors in South Africa.

This survey (hereinafter referred to as survey one) formed part of research towards a PhD degree study on the possible establishment of a new TPI for the South African building industry. The objective of survey one was to gauge the perception of these quantity surveyors towards the use of TPI's in general, and the BER index in particular, taking into account that that this is the only TPI available in South Africa, as well as the relative "age" thereof.

2. METHODOLOGY

The population for survey one could theoretically consisted of all the built environment professionals such as architects, engineers, quantity surveyors, landscape architects, town and regional planners and project managers, as well as other building professionals such as contractors, developers, etc. Apart from the fact that this population would have been very big in size, making the survey logistically very difficult, the issue in question was how many of these people are using TPI's on a regular basis?

After taking the above into consideration, it was decided to draw the sample from only quantity surveying practices in South Africa. The reason for this decision was based on the fact that quantity surveyors, as construction cost advisors, use TPI's on a regular basis, more so than any of the other built environment professionals. Another factor playing a role in the decision was that a TPI is in most instances based on information obtained from priced bills of quantities that are produced by quantity surveying practices; therefore it was assumed that such practices would have a special interest in a questionnaire related to TPI's.

A sample of South African quantity surveying practices can be considered to be representative of the population of all built environment professionals in South Africa, as it consist of practices of different sizes that are spread geographically throughout the country. Furthermore, the sample size (all quantity surveying practices registered with the Association of South African Quantity Surveyors (ASAQS)); can be regarded as adequate to meet the objectives of the survey.

The questionnaire was drawn up and submitted to the ASAQS who agreed to distribute it to all quantity surveying practices registered with the ASAQS. Questionnaires were subsequently sent out electronically via email to 741 registered practices on the ASAQS database, with a request that the completed questionnaire be returned on or before a certain date stipulated on the questionnaire.

Of the 741 questionnaires that were distributed, a total of 148 valid responses were received; a response rate of approximately 20%, which can be deemed an adequate response for a survey of this kind.

3. SURVEY RESULTS

Lack of space prevents the discussion of all the questions that were asked in the survey. The following relevant questions, with the response thereof, will be discussed.

- 91% of respondents were familiar with the composition of the BER index. This was a positive indication because it meant that the majority of respondents would have been able to correctly interpret the questions that followed.
- 62% of respondents indicated that they are currently subscribers to the BER/MFA reports. This can be seen as a fairly low percentage in light of the fact that it is the only report of its kind available in South Africa.
- The next question asked respondents, who recently unsubscribed from the BER/MFA report, to supply reasons for ending their subscriptions. Of the 48 practices who responded, 34 (71%) indicated that they did not use the report on a regular basis. This response correlates with the previous question, indicating that not all practices use the report regularly.
- When asked whether practices contribute information on a regular basis the BER index, 95 respondents (64%), indicated that they either “seldom” or “never” contribute to the index. This response correlates with one of the perceived problems of the BER index, namely that it is based on insufficient information.
- Although 95 respondents indicated in the previous question that they “seldom” or “never” contribute information to the BER index, 111 practices responded to the follow-up question that asked for reasons for not contributing. The majority of respondents (50%) gave as reason that they do not have enough information to contribute, while for 18% it was too time consuming. It is rather alarming that 50% of the respondents to this question (and 37% of the total respondents) did not have enough information available to make a contribution as information can be sent to the BER throughout the year for quarterly publication.
- When asked whether a TPI is an important tool that is used by quantity surveyors, developers, etc., the majority of respondents (89%) agreed with this statement. This is in slight contrast to the 62% of respondents who previously indicated that they do not subscribe to the BER/MFA report.
- When asked whether there is room for a new TPI, based on current building trends, for the South African building industry, there was a mixed response with the majority response (40%) unsure, 38% answered “yes” while 22% answered “no”.
- In another question, 64% of respondents agreed with the statement that a TPI should preferably be compiled by an academic institution with the necessary expertise regarding the building industry.
- Respondents were also asked whether their practices would contribute information for the compilation of a TPI if it can be done electronically. The aim of this question was to explore whether the previously identified problem regarding the contributing of information for compiling a TPI could be overcome. The majority of respondents (121 or 85%) responded positively.
- It was interesting to see that a large number of respondents (63%) were of the opinion that they would be willing to pay a subscription fee to obtain a new TPI that is published on a regular basis.

- Although respondents indicated their willingness in the previous question to pay a subscription fee, 69% of respondents indicated in a follow-up question their preference that a TPI should be funded by external funds so that they can receive the publication free of charge. Maybe it is just a natural occurrence among quantity surveyors, who are known for their ability to “look after money”, to prefer to get something free of charge rather than paying for it!
- When asked whether the ASAQS should play an active role in the publication of a TPI, the overwhelming majority (86%) agreed with this statement
- Respondents were also asked what other information, apart from a new TPI, such as a TPI published per geographical region; a TPI for different building types as well as separate indices for electrical and mechanical work would be useful to their practices. “Yes” responses of 92%, 87% and 89% respectively were received for the above examples.
- Lastly respondents were asked whether, in their opinion, there was a need for a body similar to that of the Royal Institution of Chartered Surveyors’ Building Cost Information Services (BCIS) in the United Kingdom. According to the BCIS, some of the services that they provide include measuring price movement, benchmarking, market research, providing statistical analysis, forecasting and impact studies (Building Cost Information Services, 2013). From the response (79% “yes”), most of South African practices will welcome the establishment of a similar body to the BCIS for the local building industry.

Mention must also be made of a study by Hitch (2014) that took place after survey one was conducted, where an investigation on the accuracy of the BER index was conducted. This survey formed part of a BSc (honours) degree treatise. The objective of this study was a survey questionnaire (hereinafter referred to as survey two), to quantity surveyors in South Africa in order to gauge their perception towards the BER index. Similarly to survey one, the reason for using South African quantity surveyors as the survey population was because they use the BER on a regular basis. This questionnaire was posted on the website of the ASAQS to which quantity surveyors could respond. The total number of respondents came to 49 (Hitch, 2014). The following is a summary of the results of some of the questions in survey two. Since not all the questions in this survey relate to the topic of this paper, only a selection of relevant questions will be discussed.

- The first question was asked to determine how well known the BER index is amongst quantity surveyors in South Africa. The response of 80% correlates with the result of a similar question asked in survey one.
- When asked how often practices use the BER index, 67% of respondents claimed that it is used on each project, while 27% indicated that it is used only on particular projects. This is another indication that quantity surveyors consider a TPI as an important tool in their practices.
- Respondents were asked to indicate whether they think that the BER index should be updated. This is seen in light of the fact that the index has not been updated for approximately 40 years. In response 55% of the respondents believed that the index needs updating. This can be compared to survey one where 38% of respondents indicated that there is room for a new TPI in the South African building industry.
- Lastly an open-ended question was posted where the respondents were requested to put forward potential improvements to the BER index.

One of the items that were raised by a number of respondents was the issue that more data need to be submitted by quantity surveyors in order to create more accurate indices. This correlates with the response in survey one where it was indicated that a large number of respondents do not contribute information on a regular basis.

4. DISCUSSION OF THE RESULTS

A number of inferences can be drawn from the responses received from the two surveys that were conducted. The first of these is that most quantity surveyors in South Africa seem to be familiar with TPI's (or at least with the BER index). Most quantity surveyors also deem a TPI to be an important tool for use in their practices, but, as indicated in survey two, the majority of respondents indicated their perception that the BER index needs updating because of its age. This is in some way supported by survey one, where almost 40% of respondents do not subscribe to the quarterly BER/MFA report, although there can be additional reasons for this, such as the cost of the report.

One of the big issues that have an influence on the accuracy of a TPI in general and the BER index in particular, is the lack of information to base it on. Akintoye (1991) stated in this regard that it is important to ensure that there will be enough data in the right format available on a continual basis to construct an index. If not, it may distort the reliability of the index (Akintoye, 1991).. In the case of the BER index, the information referred to above are priced bills of quantities, and one of the perceived problems with the validity of the index is the quantity surveying practices do not submit enough information. This was supported by Martin (as cited by Brümmer, 2003) who stated that the index has become unstable because "insufficient questionnaires are completed to yield statistically reliable results". The above is also mentioned in the literature by Flemming and Tysoe (1991) whose opinion it was that construction-price indices require a reasonably large number of representative bills of quantities because the rates used by different contractors can vary considerably This observation is also supported by 64% of the respondents in survey one who either "seldom" or "never" contribute information to the index.

A possible remedy for the above problem is to make it easier for quantity surveying practices to submit information electronically in lieu of the completion of a standard form (this suggestion was supported by respondents in survey one). This can also solve one of the issues discussed in survey one, viz. the involvement of the ASAQS with the publication of indices. If quantity surveying practices can submit their priced bills of quantities electronically to the ASAQS, they, in turn, can make this information available to interested bodies, such as the BER, for different purposes.

The last item that needs discussion is the compiling of a new, alternative TPI for the South African building industry. In both surveys this was mentioned as a possibility and can also be combined with one of the questions asked in survey one, whether a TPI should be compiled by an academic institution with knowledge of the building industry. This issue can be solved by a South African academic institution doing research on the methodology of compiling a new TPI and, if found feasible, this TPI can be published as an alternative index to serve as a checking mechanism.

5. CONCLUSION

Although a limitation of the study (especially survey two) was the relatively small sample of the survey (49 respondents compared to the 148 in survey one), the results of the surveys can be considered to be comprehensive. In conclusion, therefore, it can be stated that, although the two surveys that were discussed above were conducted with different purposes in mind, the implication of the study is that the results from said surveys can be used to the advantage of not only the South African quantity surveying fraternity, but the building industry at large. A concerted effort should be made by the ASAQS to assist quantity surveying practices to submit information (e.g. priced bills of quantities) without having to complete unnecessary forms. This information can then be used by both the BER and another body, such as an academic institution, to construct a TPI, based on recent information, as an alternative index for the South African building industry.

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