SUMMARY

Estimates are used for evaluation of project feasibility, budgetary, cost planning and control purposes. To ensure clients' satisfaction, quantity surveyors need to achieve an acceptable level of accuracy in their estimates.

Evaluation of quantity surveyors' current practices in the preparation of estimates and comparison of estimates with tender prices contradicts observations of previous studies that accused them of perpetuating inaccuracy with their practices. It was observed that:

(a) On 70% of the projects, quantity surveyors carried out comparison between estimates and tender prices.

(b) In addition to detecting errors in tenders, comparisons between estimates and tenders are made to update the individual firm's cost database.

(c) Multiple sources of cost data are referred to for estimate preparation.

Accuracy of estimates achieved by quantity surveyors in Singapore was measured by analysing data collected from 42 building projects through structured interviews. A higher level of accuracy with coefficient of variation of 8.08% is achieved by quantity surveyors in this study when compared with Morrison's (1984) 15.45%, Betts and Gunner's (1988) 11.30% and Cheong's (1991) 14.13%. However, comparison with the acceptable accuracy established from the opinions of 60 respondents comprising quantity surveyors, architects and project managers revealed that the accuracy achieved is not acceptable. The mean error of the 42 projects was 7.47% and the
maximum error was 25.93% exceeding the acceptable accuracy with mean error of 6.27% and maximum error of 15% stated by the respondents.

The three most important factors affecting accuracy are:

(a) Sufficient design information for the preparation of estimates
(b) Poor information and document management
(c) Changes in client's specification and requirements.

However, quantity surveyors, architects and project managers attached different importance to factors affecting accuracy.

The three most effective measures to improve estimating accuracy are:

(a) Ensuring sufficient design information to enable calculation of quantities for estimate preparation
(b) Checking estimate assumptions with client and design consultants
(c) Having proper design information and document management. This includes all design documents with most up-to-date amendments and ensuring that all participants are working on the same set of information.

The three most effective measures correspond to the three factors with the greatest impact on accuracy of estimates. Again, it was observed that the quantity surveyors, architects and project managers have different opinions on the effectiveness of the various measures.

Based on the findings of this study, the following conclusions are made:
(a) The current practice of the quantity surveyors relating to estimate preparation and comparison of estimates against tender prices do not have negative impacts on the accuracy of estimates.

(b) Although the accuracy of estimates prepared by quantity surveyors in Singapore appears to have improved since studies conducted by Betts and Gunner (1988) and Cheong (1991), it is still below the acceptable level that professionals would like to see for the building industry.

(c) Opinions on significance of factors affecting accuracy and effectiveness of measures improving accuracy differs among quantity surveyors, architects and project managers.