SUMMARY

It is agreed that organizational structure has strong impacts on the organization performance. However, until recently, the project-team structure of the building contractors has not gained much attention from researchers. This research tends to determine the relationships between the project-team structural features and the elements of different projects. With this knowledge, the project manager will be able to set up the suitable project team structure for projects in different situations.

Through the literature review, the project-team structural features and project elements are identified. Two continuous scales, the “structural organic-ness” and the “environmental uncertainty”, are taken as measurements for the structural features and project elements respectively. Consequently, the relationships between the structural features and project elements are hypothesized on the basis of the Structural Contingency Theory.

A survey is forwarded to test the hypothesis. Respondents are project managers who worked in G7 or G8 (CIDB Grade) building contractors in Singapore. Each project manager is required to supply the basic information of a building project and that of the project team which performed this building project as well as that of the organization norms of his company. Data collected from the survey are statistical analyzed to verify the hypothesis.

Findings from the statistical analysis partly verified the Structural Contingency Theory. Among the 40 relationships, 12 of them are at significant level in predicted direction. Meanwhile, none of them are at significant level in reversed direction. Moreover, it is
also noticed that, elements which are relevant to the construction task of the project team (task elements) play more important role on project-team structure than the elements which are relevant to organizational norms (organization elements).

With the assumption that the completed contract amount is normally distributed along the whole construction duration, this research further proposed the fluctuating pattern of structural features along the whole construction duration. The predicted values of the project-team structural features are compared with the actual values for four cases in different countries. It is noticed that, for cases in Singapore and Hong Kong, the predicted value is quite close with the actual value. However, the predicted value is far different with the actual value for cases with unfavorable conditions in other countries. As a result, the applicable scope of the relationships proposed in this research is limited.

Basing on these findings, this research suggests that, the relationships proposed in this research can be guidance for project managers when they are undertaking projects in Singapore or in other countries with similar favorable conditions, such as Hong Kong. Project managers need to consider the requirements of each project carefully and to design a project-team structure deliberately to satisfy these requirements.