ABSTRACT

The shape of the S-curve which describes the cumulative costs of a construction project affects the amount of capital costs the project's owner will incur during the construction period. Little research has been conducted to uncover the relationship between various S-curves and the project capital costs. This dissertation addresses the issue by examining the S-curves of five high-rise office buildings built in Singapore during the 1990's. An efficiency index called the S-curve Index was created to account for the capital costs associated with each S-curve and these indexes were compared. It was found that the difference in capital costs of these five projects was substantial. The overall costs associated with the least efficient S-curve was 10% higher than that associated with the most efficient S-curve. Two building parameters, cost and project duration, are positively and highly correlated with the SCI such that the higher the project cost and the longer its duration, the greater is the capital costs associated with a project S-curve.

Keyword: S - Curves, Construction Industry, Real Estate Development, Construction Finance, Construction Management