

Influence of organizational characteristics on construction project performance using corporate social networks

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Abstract

This exploratory research examined the relationship between project performance and organizational characteristics in construction companies. Nine Chilean construction firms were involved in this study. Key performance indicators (KPIs) were introduced to periodically capture the project performance of 41 projects in these companies. Furthermore, their organizational characteristics were evaluated using social network analysis metrics. A correlation analysis revealed the relationships among four metrics from six social networks and nine KPIs. Significant correlations were found between the density, average degree, diameter, and average path length of social networks and the medians and standard deviations of KPIs. The results confirmed that a relation exists between high connectivity and short communication paths within the social networks of a construction company and high KPIs of construction project performance. Additionally, high inverse correlations were observed, suggesting that connectivity may be a consequence of poor project results, such as for the accident KPI. The results indicate that high connectivity and closeness inside corporate social networks are not necessarily related to good performance in construction projects. Thus, corporate social networks do not possess an ideal condition that enables optimal company performance in all areas.