

ICSEEM 2013 Keynote Speaker:

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Speech Title:

Managing Innovation in Software Engineering in Japan

Abstract:

The objective in this speech is to better understand the mechanisms of how software engineering capabilities relate to IT firms' business performance and business environment in a challenging era for the Japanese software industry. To this end, we designed a research survey to look into software engineering capabilities, and administered it, together with Japan's Ministry of Economy, Trade and Industry. Focusing on management of software engineering innovation, the common order effects originating with human resource development along the paths of service innovation, product innovation, and process innovation were empirically verified based on the data-centric approach. Based on the panel analysis, several series correlations among the software engineering capabilities were proved. The longitudinal analysis suggested positive relationships among software engineering capabilities and profitability in the long-term. However, the relationships among the software engineering capabilities and business performance vary significantly depending on the origin of a vendor: maker-turned, user-turned or independent. Therefore, in formulating public policy proposals to promote software engineering innovation, we should consider both the individual characteristics and the organizational inertia, broken down by type of vendor.

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