

A Framework for Effort Estimation in Software Projects

Hanan Mohamed Mohamed Moussa
Dr. Galal Hassan Galal-Edeen and Dr. Amr Kamel

Abstract

The thesis proposes effort estimation framework which enhances estimated effort by enhancing sizing adjustment factors. Enhancing sizing adjustment factors is achieved by grouping technical complexity factors to two adjustment factors (difficulty and distribution) and by adding a third adjustment factor which is quality of requirements. Quality of requirements is a project environmental factor. The framework concentrated on a sample of Egyptian companies with an objective to enhance effort estimation in these companies. The proposed effort estimation framework obtained improved results with respect to effort variance. The original average effort variance was 47% in the sample projects before applying the framework, whereas the average effort variance after applying our proposed framework is 36%. However, the main outcome of this research is the lessons learned from the development of this framework not only the framework itself and its results.

Keywords: Effort estimation; Functional sizing; Adjustment factors.