

Cost Estimation and Analysis for Government Contract Pricing in China

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Abstract. Software cost estimation methods and their applications in government contract pricing have been developed and practiced for years. However, in China, the government contract process has been questioned in some aspects. It is largely based on analogy to past experience and/or expert judgment, with a lack of informed decision making supported by mature estimation methods. Moreover, two primary stages of the contract review process for technical and finance contents are disjointed, which greatly limits the accuracy and efficiency of government investment decision. To improve cost estimation and assessment practices in Chinese government contract pricing, we propose the CONstructive GOvernment cost MOdel (COGOMO), which provides guidance and insights for formal cost estimation. This model emphasizes the importance of accumulating knowledge from both government and industry data repositories, and leverages to establish an industry benchmarking reference model for local government contract pricing. It integrates multiple classical research results in addition to COCOMO II, and establishes the first formal model on software cost estimation and analysis for Chinese government context. A list of suggestions is also discussed for government's further improvement on estimating practices.

Keywords: Cost estimation, Government contract pricing, Cost analysis.