ELSEVIER



Contents lists available at ScienceDirect

Information and Software Technology

journal homepage: www.elsevier.com/locate/infsof

Empirical investigation of refactoring effect on software quality

Mohammad Alshayeb*

King Fahd University of Petroleum and Minerals, Information and Computer Science Department, P.O. Box 1172, Dhahran 31261, Saudi Arabia

ARTICLE INFO

Article history: Received 11 September 2008 Received in revised form 7 March 2009 Accepted 2 April 2009 Available online 18 April 2009

Keywords: Software metrics Refactoring Quality improvement Empirical study

ABSTRACT

Developers and designers always strive for quality software. Quality software tends to be robust, reliable and easy to maintain, and thus reduces the cost of software development and maintenance. Several methods have been applied to improve software quality. Refactoring is one of those methods. The goal of this paper is to validate/invalidate the claims that refactoring improves software quality. We focused this study on different external quality attributes, which are adaptability, maintainability, understandability, reusability, and testability. We found that refactoring does not necessarily improve these quality attributes.

© 2009 Elsevier B.V. All rights reserved.

^{*} Tel./fax: +966 3 860 4874. E-mail address: alshayeb@kfupm.edu.sa