Abstract

Nowadays, the enterprises including small and medium size enterprises (SMEs) are critically dependent on software. Software is crucial for obtaining the enterprise’s objectives and to maintain survivability and sustainability. Consequently, there is growing concern for ensuring that software products meet certain quality criteria. In the context of software engineering, software quality is associated with two related but distinct notions that exist wherever quality is defined in a business context: Software functional quality reflects how well it complies with or conforms to a given design, based on functional requirements or specifications. Software structural quality refers to how it meets non-functional requirements that support the delivery of the functional requirements, such as robustness or maintainability, the degree to which the software was produced correctly. Hence advances in the definition as well as implementation of standards set the desirable attributes of quality software while pattern and methodologies emerging for quality assessment is required. However, although some studies on the software quality assessment have been reported, regarding the SMEs’ management perspective of software quality, there is a lack, and currently, there is no specific quality attributes and model that is based on management perspective. The purpose of this research is threefold. First, to determine the management’s perspective in relation to the impact of software quality assessment for SMEs, second, to identify the factors related to software quality that cast its impact on productivity of SMEs, and third, to devise and develop a software quality model based on management perspective for SMEs. This study is conducted in four main phases. The first phase is the theoretical study and the second phase is the empirical study which involves survey of SMEs management. The third phase is data analysis which deals with descriptive and inferential statistics. The fourth phase is the model development. Scope of this research is for SMEs industries. The important contribution of this research is the quality model which is based on management’s perspective of software quality for SMEs. It can be used as a standard and guideline for choosing appropriate software technology to run the business productively and profitably.

Keywords: Software Quality, Software Quality Model, Quality Assessment, SMEs Productivity.

Contribution of Study

The finding of this study can shed light on the issue of productivity and efficiency of SMEs. The study proposes several ways through which SMEs can enhance its productivity and performance over the years. This research study suggested ways through which SME’s productivity can be improved through quality software. This research proposes a model that can lead to quality software assessment, and promotes SME quality factors including human resource. This research has significant contribution in the 21st century. The use of this research can help organizations attain the desired operational efficacy and excellence by improving the level of their productivity. This study also found that there is a strong and positive relationship between software quality and SME productivity.