

A Systematic Snapshot of Small Packaged Software Vendors' Enterprises

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ABSTRACT

This article describes how small packaged software vendors' enterprises (SPSVEs) have played a massive role in a software environment and contributed dramatically to economies. The purpose of this article is to investigate and categorize the most recent of literature addressing small packaged software vendors' enterprises through a systematic snapshot research in order to identify current research topics and highlight some areas needing more consideration. The pattern of the authors' systematic approach is based on developing a classification scheme which targets a collection of papers published within the period of 2007-2017. The authors analysed one hundred and one papers from peer-reviewed conferences, journals, and workshops to examine the current state of SPSVE's research in order to provide systematic snapshot mapping (SSM) that includes the small packaged software life cycle, research methods used, and country of study. The systematic snapshot of 101 papers reveals that the majority of the literature has focused on the planning and implementation phases of SPSVEs. Figuring out a new model of packaged software life-cycle in SMEs will occur by applying the model of categorizations with regard to the life cycle with its factors and sub factors. Moreover, it will contribute to finding research methods, regions, top ten citation, articles type classifications, and other kinds of classifications. This research is targeted to small packaged software vendors' enterprises (SPSVEs). The authors' finding is intended for software research areas more than economic research areas. This article has presented a high degree of benefits in order to assist researchers in evidence-based decision making in terms of investigating hot research areas in line with the small packaged software vendors' enterprises (SPSVEs).

KEYWORDS

Literature Review, Packaged Software in SMEs, Small Packaged Software, Systematic Snapshot

1. INTRODUCTION

In recent years, a vast knowledge has been fashioned in terms of how companies influence software engineering (SE) through a dramatic number of empirical studies and investigations (Da SiLVA et al., 2011; Kitchenham et al., 2009). In addition, since 2004, an Evidence-Based Software Engineering (EBSE) by Scientific Literature Reviews (SLRs) is concerned of precise problems that occurred from the nature of software engineering and software types (Kitchenham, Dyba, & Jorgensen, 2004). It offers a distinction between packaged software and bespoke software, which vary depending on development teams, developing approaches, and type of stakeholders (Jebreen & Al-Qerem, 2017).

Although software development companies have implemented packaged software (PS) to its customers, the characteristics of their software products are the key to competitive features in the software industry. In fact, packaged software meets the particular demands of customers in terms of

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software customization and keeping up with the customer needs. There are a variety of customizations from one customer to another, resulting in different difficulties and challenges during its usage.

In other words, packaged software (PS) has formed a significant value in the world of economics. Moreover, software packaging vendors have considerable competition among them to be consistent with their newest product updates seeking to fulfil customers' satisfaction according to the features and also the costs in PS market. In this paper, we followed a variant of the structural procedures of our Systematic Snapshot Mapping (SSM) method is derived from Raza (Raza, MacDonell, & Clear, 2013) systematic snapshot, and Haddara literature reviews (Haddara & Zach, 2012).

The main criteria of gaining a high-level in a particular field of researches are based on Systemic Methods (SM) which classify and categorise the relevant research literature according to the various schemes (Fauzi, Bannerman, & Staples, 2010; Petersen, Feldt, Mujtaba, & Mattsson, 2008). In our study, we conducted a systematic snapshot mapping process to investigate the area of packaged software, especially in small software enterprises in several areas in line with software engineering community issues. The European Commission (EU) classifications have produced the concept of small to medium-sized enterprises (SME) that are divided into three types according to the size of the enterprises (Micro, small, small to medium), and they are an extremely substantial target in the world of economy side (Commission, 2003).

Briefly, we classify the very recent small packaged software literature in the next section. Others sections are organized as follows: Section 2 introduces our research approach in further detail; Section 3 introduces the findings; Section 4 briefly summarises our results by concluding this paper.

2. MATERIAL AND METHOD

This section presents the investigation method is used to gather resources regarding the current literature on SPSVEs using the Systematic Snapshot Mapping (SSM) method. To classify this literature, we allocate a research time period between January 2007 until August 2017. This study followed guidelines produced by Petersen (Petersen, et al., 2008) for carrying out the systematic mapping studies.

Regarding the method of classifications in this paper, we present a new driven approach of classification is fit with packaged software lifecycle which has taken from Shaul (Shaul & Tauber, 2012). All preceding researchers have been used the packaged software lifecycle based on agenda classification research in 1999 for the large enterprises (Esteves & Pastor, 1999). However, we conducted a new model of classifications which presented in 2012 by Shaul (Shaul & Tauber, 2012) that's suitable for SPSVEs investigations.

Regarding visualisation of data, we used bar graphs, network analysis graphs, tables, and other informative shapes representing the data. Based on Raza and Haddara (Haddara & Zach, 2011, 2012; Raza, et al., 2013) we have integrated structures to represent our data and procedures to gather a systemic snapshot of the values of this work that are useful in the rapid growth in the research literature.

2.1. Research Questions

The following research questions were established for this study:

1. What are the investigation areas of small package software vender?
2. What are the issues, locations, dates, years of publish, research methods and other classifications investigated in conducting the study?
3. How is research being carried out in small packaged software in regard to methods and approaches?

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