ERP Systems and Accounting: A Systematic Literature Review

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ABSTRACT

Over the last decade, scientific literature has given more attention to enterprise resource planning system in the accounting context. In that sense, the authors perform a systematic literature review in order to map and assess the intellectual territory based on scientific publications from 2000 to 2018, in ISI Web of Science and Scopus database. Based on grounded-theory methodology approach, they performed a content analysis to develop their ERP-Accounting information interface literature framework. The results confirm that it is a recent and growing field of study. Five main groups were identified as well as the main authors and journals, such as International Journal of Accounting Information Systems, Qualitative Research in Accounting and Management, Journal of Accounting and Organizational Change, Management Accounting Research, Journal of Emerging Technologies in Accounting, International Journal of Accounting and Information Management, and Industrial Management and Data Systems. Mainstream and interpretative research approach are the main paradigms when studying ERP and accounting information relationship. The authors also identified recent key areas that may indicate tendencies towards future studies and which allows researchers to strategically focus their research.

KEYWORDS

Accounting, Accounting Information System, Enterprise Resource Planning, SLR, Systematic Literature Review

1. INTRODUCTION

The changes in the business environment have created new challenges to organizations (Spathis and Constantinides, 2004) and professionals (Sigh and Best, 2016, Werner, 2017). In order to survive and succeed organizations have the need to find new ways to gain competitive advantages. The development of information technology (IT) allows organizations to adapt as it provides tools for adequate responses to the business environment (Spathis and Constantinides, 2004). One of these tools is enterprise resource planning (ERP) as it attempts to integrate all organizational information in one central database (Dechow and Mouritsen, 2005). Enterprise resource planning systems have changed the way data is collected, stored, disseminated and used by organizations (Sutton, 2006). Through the use of ERPs, it can be noticed that management accountants’ role adds value by analyzing the information available (Sutton, 2006). According to Arnold (2006), the principal motivation behind ERPs investments is to improve efficiency, effectiveness and organizational performance as the information can be assessed quickly which helps decision making. Although literature emphasizes the benefits for an organization that implement an ERP system, the successful ERP implementation examples are only a small minority of cases, the integrated information may create some disruptive...
effects leading to disintegration, and past studies found that 70% of the ERPs implementation projects failed in achieving the expected goals (Dechow and Mouritsen, 2005; Gordon and Dyer, 2014; You, Lee, Chen & Jiao, 2012).

The importance of ERP systems caught attention of researchers and practitioners and in a comprehensive review about ERP research field, Schlichter and Krammergaard (2010) found that accounting was one of the areas of concern, and accounting discipline represented 9% of total publications. Due to the fragmented literature related to successful and unsuccessful ERP implementation cases and the lack of systematic literature reviews (SLR) on the relationship between ERP and accounting information, we perform a SLR to clarify the state-of-the-art regarding this relationship in ISI Web of Science and Scopus databases. With the aim of mapping and assess the current intellectual territory of the relationship between ERP and accounting information, we carried out two separate searches of scientific papers, without timespan filter, leading us to an initial sample of 206 papers. Through content analysis, we developed our theoretical framework where we identify key topics and themes that may contribute for further research on ERP-Accounting information interface.

In this paper, we start by describing the utility of SLR methodology and the relevant aspects of the first two SLR stages, i.e., planning the review, conducting the review. We then present SLR and content analysis results, and we conclude by discussing results as well as future lines of research related to the ERP-Accounting information interface.

2. METHODOLOGY

Despite the growing importance that social sciences literature has been giving to SLR, meta-analysis, scientometric analysis, bibliometric analysis, and so on (Briner and Denyer, 2012; Crossan and Apaydin, 2010; Pittaway and Cope, 2007; Pittaway, Robertson, Munir, Denyer, and Neely, 2004; Rousseau, Manning, and Denyer, 2008; Walker, 2010), there has been few attempts to systematically map the field of research in conjunction with content analysis. In order to fill this gap and achieve the objectives of this research, i.e., clarify the state-of-the-art regarding the relationship between ERP and accounting information, it requires the process of collecting, analyzing and organizing a considerable amount of scientific papers. In that sense, our strategy is based on getting an overview of current scientific contributions and develop a literature framework in order to map key topics and themes for further research.

The systematic approach as well as the efforts from medical sciences to improve the quality of the review process, caught the attention of Tranfield and Mouchel (2002) and Tranfield, Denyer, and Smart (2003). In order to overcome the low level of formality and unstructured processes used to plan literature reviews in social sciences, which may inhibit the capacity to explore and decide upon the key areas for research, Tranfield and his colleagues propose the adoption of SLR to management field since it is conducted in a systematic, transparent and replicable form.

Thus, the standards applied to primary researches are, or should be, applied to secondary researches through SLR, since SLR are rigorous scientific procedures that help reduce researchers’ bias (Denyer and Neely, 2004; Tranfield et al., 2003).

Tranfield et al. (2003) suggested three-stages procedures that can be observed in Table 1.

Following the suggestions made by Tranfield et al. (2003), we rigorously apply the three stages of SLR. Initially, we studied the concept, i.e., the relationship between ERP and accounting information, then we develop the review protocol (see Table 1). Secondly, to ensure the pertinence of the search terms and to help reduce researcher bias, both researchers interact until agreement was reached. Three terms were identified as the key terms that allowed us to extract the relevant articles, i.e., ERP, enterprise resource planning and accounting. To ensure both terms were in the title, abstract or keywords we use the Boolean AND operator. This process helped us to the definition of the following search equation: “ERP” AND “enterprise resource planning” AND “accounting”.


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