

# Research Trends in Information Systems From the Management Discipline Based on Co-Occurrence Analysis

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## INTRODUCTION

There is a generalised consensus on the notable role that information systems and technologies (IS/IT) play in organisational performance (Mithas and Rust, 2016; Chen et al., 2014; Sabherwal & Jeyaraj, 2015; Wamba et al., 2017). The literature has traditionally associated the impact of IS/IT with technical and operational factors related to cost reduction and improved efficiency and productivity (e.g. Markus et al., 2000; Gattiker and Goodhue, 2005; Kale et al., 2010; Rouhani and Mehri, 2018). Recently, however, its impact seems to have been demonstrated in other management factors, such as those related to the satisfaction and motivation of human resources, their communication and internal coordination, their performance in decision making and in improving quality and services to clients (Shang and Seddon, 2000; Al-Mashari et al., 2003; Kale et al., 2010; Rouhani and Mehri, 2018) as well as strategic factors, linked to internationalisation (Morikawa, 2004), management of cooperation agreements (Sarker et al., 2012), organisational learning (Shang and Seddon, 2000) and innovation (Simao and Franco, 2018; Singaraju et al., 2016).

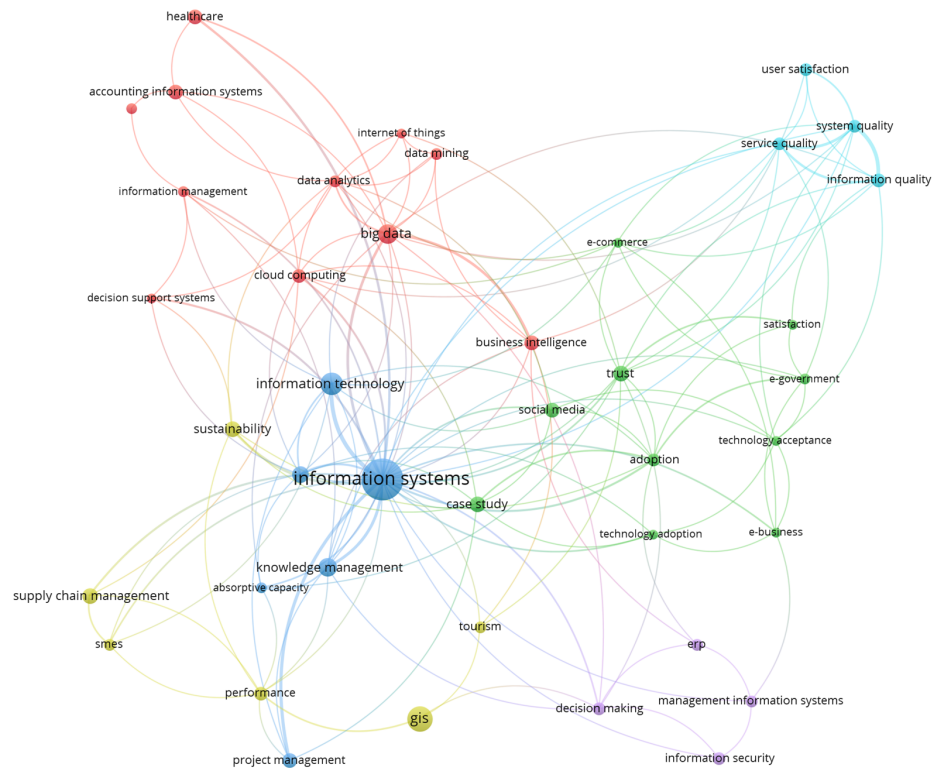
IS/IT support has thus led to the development and implementation of new organisational and inter-organisational business models (Loebbecke and Picot, 2015), which favour the creation of virtual clusters (Hernández and Peiró, 2013), improve the supply chain (Vendrell-Herrero et al., 2017), and even enable more sustainable strategies linked to the circular economy (Jabbour et al., 2017).

This evidence has been widely explored and recognised by both business practice and academia (Chen et al., 2014); as a result, the literature on information systems has acquired considerable relevance in the field of business administration due to its major role in the strategic process (Whittington, 2014). A growing number of journals now specialise in information systems and have a major impact in the field of management knowledge; some examples are MIS Quarterly, Journal of Information Technology, Journal of Strategic Information Systems, Information & Management, Information & Management, Journal of Management Information Systems, and Information Systems Research.

In order to observe the impact of information systems research on the scientific community, we carried out a bibliometric study based on an analysis of the concurrences (Lou and Qiu, 2014) of the key words used in publications on the subject. This type of quantitative analysis can reveal the structure that supports a certain topic in a discipline and its evolution, as well as the most relevant related concepts.

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Figure 1. Network of key concepts with the greatest concurrence linked to information systems (period 2016-2019)



Our search strategy in the Scopus database was to first select all articles in the business, management and accounting category for the period 2016-2019 (up to 6 February 2019) whose keywords include information systems. This search yielded an input of 1,778 scientific articles. We then analysed these articles using the VOSviewer program to identify the most frequent keywords, which are highlighted in the figure and tables below.

Specifically, Figure 1 displays the nets, while Figure 2 displays the densities of the nets. Both figures were created by taking the 7737 keywords (introduced by the authors), filtered to obtaining a minimum of eight occurrences; this process resulted in 42 keywords related to the information systems in the articles of the area of business, management and accounting.

Based on this information, the next step in this bibliometric study is to conduct a cluster analysis of these 41 concepts (Wang et al., 2006). Specifically, the program displays six clear groups of theoretical analysis, as shown in Tables 1-6. In what follows, these six clusters are described together with their main focuses of analysis and publications in the literature.

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