The Challenge of Establishing a Recognized Interdisciplinary Journal:
A Citation Analysis of the International Journal of IT Standards and Standardization Research

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ABSTRACT

This paper examines the impact of interdisciplinary IT standardization research by analyzing the International Journal of IT Standards and Standardization Research (JITSR). Three issues will be addressed: (1) What is the scientific impact of IT standardization research published in JITSR? (2) Are JITSR publications on IT standardization interdisciplinary, and if so, to what extent do they cite publications in other disciplines? (3) Is IT standardization research recognized as an interdisciplinary discipline, and if so, to what extent do papers in other disciplines cite JITSR publications? The authors find that although the scientific impact of JITSR is comparatively low, it is recognized in different disciplines. The findings also show that research published in JITSR is, to some extent, interdisciplinary; papers published in JITSR refer to a number of different disciplines.

Keywords: Citation Analysis, Interdisciplinary Journal, IT Standardization Research, Scientometric Data, (Social) Sciences Citation Index, Standards

INTRODUCTION

The International Journal of IT Standards and Standardization Research (JITSR) provides a forum for theoretical and practical research into IT standardization. This paper presents a citation analysis of JITSR. Its originally stated overall scope is:

To be a platform for presenting, and discussing, the broad variety of aspects that make up IT standards research. This includes, but is certainly not limited to, contributions from the disciplines of computer science, information systems, management, business, social sciences (especially science and technology studies), economics, engineering, political science, public policy, sociology, communication, and human factors/usability. In particular, the journal wants to both support and promote multi-disciplinary research on IT standards; 'IT' should be understood in a very broad sense. (JITSR, 2011)

Thus, JITSR invites both monodisciplinary and interdisciplinary papers from a wide array of angles. Given its interdisciplinary focus, the journal's papers combine contributions from different scientific disciplines and therefore we would expect articles in the journal to cite research in journals outside of the field of standardization, and papers in journals beyond the field of standardization to cite publications in JITSR. We explore these issues in this paper. More specifically, our objective is to analyze the impact of research into IT standardization. The primary question is: is JITSR recognized as an interdisciplinary journal and if so, to what extent are articles published in JITSR cited in publications in other disciplines?

We perform a citation analysis of JITSR and focus on core scientometric data used to estimate the journal's impact. This includes the journal's two-year and five-year impact factor, the immediacy index, and the cited half-life.

Furthermore, we assess to what extent publications are cited in other disciplines and examine the interdisciplinary character of research on IT standardization.

We start with an overview of the state of the art in IT standardization research reflecting on De Vries (2002). Subsequently, we describe our methodology. Then, we present our results and we compare these results with other journals. We conclude with a discussion of the contributions and limitations.

IT STANDARDIZATION: A NEW DISCIPLINE?

One of the main aspects of a mature scientific discipline is generally agreed upon definitions and terminology (Kuhn, 1962). However, there are no generally accepted definitions of the main concepts that underlie IT standardization (De Vries, 1997). In fact, the literature offers many, often conflicting, definitions and classifications (David & Greenstein, 1990; Krechmer, 1996; De Vries, 1997; De Vries, 1998; Blind, 2004). Furthermore, many different terms are used to refer to the concept 'standard' including interface format (Van de Kaa et al., 2011), dominant design (Suarez 2004) and technology (Schilling 1998; Schilling 2002). According to its website, the mission of the International Journal of IT Standards and Standardization Research (2011) is to "publish research findings to advance knowledge and research in all aspects of IT standards and standardization in modern organizations". Following Dooyeweerd (1955 and 1957), De Vries (2002) argues that there are 15 aspects and each of these is studied by one fundamental science, ranging from mathematics to theology. For instance, Ailleret (1985) and Bongers (1980) provide mathematical approaches to standardization, Stratton (1921) examines the physical aspect (chemistry), Brehm and Brehm (1981) study the psychological aspect, Puffert (2002) conducts a historical study, Cochoy et al., (1998) applies

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