Profiling research published in the *Journal of Enterprise Information Management* (*JEIM*)

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Abstract

Purpose – The purpose of this paper is to analyse research published in the *Journal of Enterprise Information Management* (*JEIM*) in the last ten years (1999-2008).

Design/methodology/approach – Employing a profiling approach, the analysis of the 381 *JEIM* publications includes examining variables such as the most active authors, geographic diversity, authors' backgrounds, co-author analysis, research methods and keyword analysis.

Findings – All the findings are in relation to the period of analysis (1999-2008). Research categorised under descriptive, theoretical and conceptual methods is the most dominant research approach followed by *JEIM* authors. This is followed by case study research. The largest proportion of contributions comes from researchers and practitioners with an information systems (IS) background, followed by those with a background in business and computer science and IT. The keyword analysis suggests that "IS", "electronic commerce", "internet", "logistics", "supply chain management", "decision making", "small to medium-sized enterprises", "information management", "outsourcing" and "modelling" are the most frequently investigated keywords. The paper presents and discusses the findings obtained from the citation analysis that determines the impact of the research published in *JEIM*.

Originality/value – The primary value of this paper lies in extending the understanding of the evolution and patterns of IS research. This has been achieved by analysing and synthesising existing *JEIM* publications.

Keywords Research, Publications

Paper type Literature review

1. Introduction

The *Journal of Enterprise Information Management* (*JEIM*), previously published as *Logistics Information Management,* is more than 20-years old. It is a well-known information systems (IS) research journal. *JEIM*'s reach and its value to IS academics is aptly demonstrated by its inclusion in the journal rankings published by the Association of Business School, Cranfield Business School and Kent Business School. Furthermore, *JEIM* appears in the journal rankings endorsed by the Australian Council of Professors and Heads of Information Systems. Given its long period in circulation, *JEIM* has developed and accumulated intellectual assets covering a multitude of IS areas. It is therefore important that this repository of knowledge be methodologically analysed and presented for the benefit of the readers. Although it is acknowledged that the *JEIM* editorials have routinely reflected on the direction of this journal, nevertheless the authors consider that an in-depth analysis encompassing the last ten

years of *JEIM* will be of great interest to the readers since a profiling study usually helps to unearth the intellectual wealth which has evolved during the period of a journal's circulation (Dwivedi *et al.*, 2009).

With reference to journal publications, profiling is considered to be an art of self-examination that aims to benefit a specific audience, and takes a journal towards the right and balanced direction (Dwivedi *et al.*, 2008, 2009; Dwivedi and Kuljis, 2008; Palvia *et al.*, 2007). This paper provides an overview of research published in the journal and complements previous work by Avison *et al.* (2008), Claver *et al.* (2000), Dwivedi *et al.* (2008, 2009), Dwivedi and Kuljis (2008) and Palvia *et al.* (2007) towards understanding and developing the area of IS research. Furthermore, this study is likely to stimulate researchers to profile other *Information Systems Journals* (*ISJs*) in order to conduct comparative/cross-journal studies which will ultimately help to understand the overall evolution of the IS discipline (Dwivedi *et al.*, 2008, 2009; Dwivedi and Kuljis, 2008).

Before stating the aim and the objectives of this paper, it is important to briefly describe efforts in reviewing IS literature by *JEIM* authors. A search of *JEIM* publications resulted in a number of review papers on a range of IS topics. A few of the more recent review papers are mentioned here. For example, by undertaking a thorough literature review, Parker and Castleman (2009) critique a range of theories for explaining the idiosyncratic nature of small firms and their e-business adoption decisions; Mason *et al.* (2008) attempt to understand knowledge management, clustering and regional development; Sutton (2006) analyse existing research to establish the basis for the logical formation of a framework for future enterprise risk management research; Mondragon *et al.* (2006) critically review business trends and drivers affecting the performance of supply chains and build-to-order initiatives; Stockdale and Standing (2004) review benefits and barriers of electronic marketplace participation for small and medium enterprises (SMEs). The publication of these studies indicate that *JEIM* regularly publishes papers focusing on various facets of IS research evolution. This paper will be a further contribution towards understanding the evolution of the IS discipline from *JEIM*'s perspective.

In light of the above, the aim of this paper is to provide a systematic review of *JEIM* publications in order to ascertain the current status of its publications. This overall aim is realised through the following seven objectives:

(1) to identify the most prolific authors publishing in *JEIM*;

(2) to determine the occupation/position of the contributing authors;

(3) to identify authors' backgrounds (i.e. academic or practitioner);

(4) to perform co-author analysis;

(5) to determine the geographic location of the contributing authors;

(6) to classify *JEIM* publications according to the research methods employed; and

(7) to determine the most frequently used keywords in *JEIM* publications.

These objectives were realised by conducting a systematic review of 381 *JEIM* papers published during the period 1999-2008. The remainder of this paper is structured as follows. Section 2 provides a discussion of the method employed in the analysis of the published *JEIM* research. The findings are presented and discussed in Section 3.

Finally, Section 4 presents conclusions from this work and the limitations of the approach.

2. Methodology for meta-data analysis

Building a profile of the last ten years of *JEIM* publications necessitated that the authors systematically review a total of 381 research papers (see Table I for number of papers published each year) to capture data on several variables like authors, institutions, etc. Such an approach for the systematic classification of research published in a particular journal is termed as a "meta-study" or "longitudinal literature review" (Palvia *et al.*, 2007; Dwivedi and Kuljis, 2008; Dwivedi *et al.*, 2008, 2009). This approach has been successfully employed to profile a number of IS and related journals, including the *European Journal of Information Systems (EJIS)* (Dwivedi and Kuljis, 2008), *Information & Management* (*I&M*) (Claver *et al.*, 2000; Palvia *et al.*, 2007), the *ISJ* (Avison *et al.*, 2008), *Information Systems Frontiers* (*ISF*) (Dwivedi *et al.*, 2009) and *Journal of Electronic Commerce Research* (*JECR*) (Dwivedi *et al.*, 2008). It is therefore considered appropriate to use the "meta-study" approach for *JEIM* also.

The methodology employed for this profiling study is now described. For each of the 381 papers in our data-set, information was collated for variables such as authors and their backgrounds, geographic regions and countries of authors' affiliated institutions, the research methods employed and the most frequently utilised keywords. The impact of the research was assessed using Google Scholar citation counts. The authors' backgrounds and geographic location variables were adapted from previous studies by Avison *et al.* (2008) and Dwivedi *et al.* (2008, 2009). However, consistent with the arguments presented in Dwivedi *et al.* (2008, 2009), three geographic regions suggested by the Association of Information Systems (AIS) were further divided into seven regions to reflect the true picture of the publication activity from different geographic regions. These regions are as follows:

(1) AIS-R1 – USA and Canada;

(2) AIS-R1 – other (Latin American and South American Countries);

(3) AIS-R2 – Europe and UK;

(4) AIS-R2 – Middle East and Africa;

	Number of publications	
Year	Frequency	Per cent
1999	38	9.97
2000	35	9.19
2001	39	10.24
2002	35	9.19
2003	39	10.24
2004	34	8.92
2005	41	10.76
2006	41	10.76
2007	40	10.50
2008	39	10.24
Total	381	100.00

Table I.
Total number of papers published/year in *JEIM* between year 1999 and 2008

(5) AIS-R3 – South Korea, Singapore, Hong Kong, Taiwan, China, Japan, India;

(6) AIS-R3 – Australia and New Zealand; and

(7) AIS-R3 – other.

The research methods employed by the *JEIM* authors were coded under different categories. These categories were adapted from previous studies by Avison *et al.* (2008), Chen and Hirschheim (2004), Dwivedi *et al.* (2008, 2009) and Palvia *et al.* (2007). These research method categories are as follows:

- descriptive/theoretical/conceptual;
- survey;
- experiment;
- case study;
- data analysis;
- interview; and
- ethnographic studies.

The reader is referred to the above-mentioned studies to find detailed information on the research method categories.

Earlier profiling studies have cautioned that the findings with regards to the most active authors and universities with the most contributors should be regarded as indicative and not an authoritative declaration (Claver *et al.*, 2000; Dwivedi and Kuljis, 2008; Dwivedi *et al.*, 2008, 2009; Palvia *et al.*, 2007), and this study takes a similar view. The authors agree with the argument presented in the earlier studies that some authors prefer to publish in a specific journal than others and some universities may have niches of research expertise that are not yet visible.

3. Findings and discussion

The findings of this study are now presented under different subsections. Each of the 11 subsections discusses the findings in relation to a particular variable. The variables are as follows: most productive authors (Section 3.1), occupation of authors (Section 3.2), area of academic expertise/authors' home department (Section 3.3), authors' background (Section 3.4), co-author analysis (Section 3.5), country and geographical regions (Section 3.6), type of publication (Section 3.7), research method employed (Section 3.8), keyword analysis (Section 3.9), citation analysis (Section 3.10) and most downloaded paper (Section 3.11).

3.1 Most active authors

An analysis is conducted to identify those authors who published the most in the ten-year period (1999-2008) in *JEIM*. Similar to the study by Palvia *et al.* (2007) and Dwivedi *et al.* (2008, 2009), for assessing research productivity the normal count approach is employed. For presenting the findings of this study, only those authors who have published three or more papers during the period studied are included in the list. A total of 694 authors contributed to the 307 papers of *JEIM*. Table II lists the 28 most productive authors, ordered according to the number of papers published in *JEIM* during the study period. The findings suggest that the largest number of papers

SL	Author name ($n = 746$)	Count ($n = 381$)
1	Gunasekaran A	7
2	Ndubisi N.O.	6
3	Hong P.	6
4	Love P.E.D.	6
5	Lee W.B.	5
6	Alshawi S.	5
7	Kahraman C.	5
8	Irani Z.	5
9	Themistocleous M.	4
10	Eldabi T.	4
11	Badii A.	4
12	Sharif A.M.	4
13	Currie W.L.	3
14	Rizzi A.	3
15	Jantan M.	3
16	Hackney R.	3
17	Gupta J.N.D.	3
18	Bal J.	3
19	Lau H.C.W.	3
20	Teo P.K.	3
21	Chung W.W.C.	3
22	Choy K.L.	3
23	Fjermestad J.	3
24	Anumba C.J.	3
25	Marri H.B.	3
26	Giaglis G.M.	3
27	Ruan D.	3
28	Baldwin L.P.	3

Table II.
The most productive authors who published three or more papers in *JEIM* between 1999 and 2008

($C = 7$) have been authored by Gunasekaran. Ndubisi, Hong and Love have contributed to six publications each ($C = 6$) and remain tied in the second position. The third and the fourth positions are occupied by four authors each. The remaining 16 authors in Table II each contributed to three papers ($C = 3$). Although not listed in the table, 56 authors contributed to two papers each ($C = 2$) and finally, the largest number of authors (661) contributed to one paper each ($C = 1$).

In terms of the most active authors, although the lists provided in previous profiling studies pertaining to the *EJIS* (Dwivedi and Kuljis, 2008) and *I&M* (Palvia *et al.* (2007) and in this study includes well known authors, only three authors (Zahir Irani, Peter E.D. Love and Wendy Currie) appear in both previous studies and in this study. As argued by previous studies (Dwivedi *et al.*, 2008, 2009; Palvia *et al.*, 2007) such a pattern indicates that each journal has their specific author population for generating intellectual wealth by contributing the scholarly papers. Author population for each journal is large but the population of authors who prefer to contribute to specific journals a number of times are few. This might be due to the fact that such authors understand the editorial policies, quality criteria and review process of their preferred journal well that they manage to publish more than two or three papers in the same journals. Thus, future studies reporting findings on the most productive

authors based on only one publishing outlet should be cautious when making authoritative claims.

3.2 Occupation of authors
The data presented in Table III suggest that the highest proportion of *JEIM* authors hold lectureships. This is then followed by professorial positions. An almost equal number of authors were either assistant professor ($C = 49$, 5.6 per cent) or associate professor ($C = 45$, 5.1 per cent), followed by authors from industry (i.e. practitioners) whose role was not possible to specify, and then equal numbers of senior lecturers and researchers. 29 (3.3 per cent) authors were engaged as doctoral candidate and then authors with administrative positions such as head of department (HoD) or Chair or directors of the centre. Other less-frequently reported roles/positions listed in Table III include Reader, visiting positions, principal lecturer, teaching fellow/senior teaching fellow and Scientist. It is important to mention that would not able to identify positions of more than half of the authors due to lack of data.

3.3 Area of academic expertise/authors' home department
In terms of the number of authors/contributors from different departments, the largest number of contributors were from departments related to Business and Management ($C = 238$, 27 per cent), followed by IS/Management Information Systems (MIS; $C = 187$, 21.3 per cent) and Computer Science/Software Engineering/Information Technology ($C = 126$, 21.1 per cent), and Engineering (125, 14.2 per cent). All other departments and their associated frequency are presented in Table IV.

3.4 Background of authors
Table V illustrates the number of contributors from academia and industry. The largest number of contributors were from academia ($C = 802$, 91.24 per cent) and a comparatively smaller proportion of authors were from industry ($C = 77$, 8.76 per cent).

Occupation	Frequency	Per cent
Lecturer	76	8.6
Professor	61	6.9
Assistant professor	49	5.6
Associate professor	45	5.1
Practitioner	44	5.0
Senior lecturer	37	4.2
Researcher	37	4.2
PhD candidate	29	3.3
HoD/ChairPerson/director	21	2.4
Reader	5	0.6
Visiting positions	5	0.6
Principal lecturer	5	0.6
Teaching fellow/senior teaching fellow	2	0.2
Others	2	0.2
Scientist	1	0.1
Total	419	47.5
Missing	463	52.5
Total	882	100

Table III.
Occupation of authors

Discipline	Count	Per cent
Business and Management	238	27
Building and Architecture	21	2.4
Computer Science/Software Engineering/IT	126	21.1
Engineering	125	14.2
Economics	24	2.7
IS/MIS	187	21.3
Informatics/Health Informatics	20	14.3
Logistics and Transportation	15	1.7
Management/MS/OR	16	1.8
Math and Statistics	27	3.1
Others	40	4.5

Table IV.
Authors' academic
background (i.e. home
department)

Authors' background	Count	Per cent
Academia	802	91.24
Practitioner	77	8.76
Total	879	100

Table V.
Authors' background

3.5 Co-author analysis
Findings related to the number of contributing authors are presented next. About 21 per cent ($C = 80$) of the papers were single author papers, 40.94 per cent ($C = 156$) papers had contributions from two authors, 26.51 per cent ($C = 101$) papers were co-authored by three authors, 9.19 per cent ($C = 35$) papers had four authors, 1.84 per cent ($C = 7$) papers were co-authored by five authors, and two papers have six authors each (Table VI).

3.6 Country and geographical regions
Authors affiliated to institutions based in 40 different countries published in *JEIM* between 1999 and 2008 (Table VII). The largest number of contributors were from institutions based in the UK ($C = 248$, 28.1 per cent), followed by the USA ($C = 183$, 20.7 per cent), Australia ($C = 96$, 10.9 per cent) and Hong Kong ($C = 49$, 5.6 per cent).

In terms of the number of authors from different geographical regions (as per the AIS), the largest number of authors ($C = 450$, 51 per cent) were from AIS region 2 – Europe and UK, followed by authors from AIS region 1 – USA and Canada

Number of co-authors	Count	Per cent
2	156	40.94
3	101	26.51
1	80	21.00
4	35	9.19
5	7	1.84
6	2	0.52
Total	381	100

Table VI.
Pattern of co-authorship
of *JEIM* papers

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SL	Country	Count	Per cent
1	UK	248	28.1
2	USA	183	20.7
3	Australia	96	10.9
4	Hong Kong	49	5.6
5	Canada	34	3.9
6	Turkey	27	3.1
7	Greece	25	2.8
8	Germany	23	2.6
9	Italy	23	2.6
10	Spain	18	2.0
11	Malaysia	14	1.6
11	Ireland	13	1.5
13	Switzerland	11	1.2
14	Belgium	10	1.1
15	The Netherlands	10	1.1
16	China	9	1.0
17	Austria	8	0.9
18	Sweden	8	0.9
19	Finland	8	0.9
20	India	7	0.8
21	New Zealand	7	0.8
22	UAE	6	0.7
23	Denmark	6	0.7
24	France	5	0.6
25	South Africa	5	0.6
26	Singapore	4	0.5
27	Taiwan	4	0.5
28	Pakistan	3	0.3
29	Botswana	2	0.2
30	Egypt	2	0.2
31	Japan	2	0.2
32	Kuwait	2	0.2
33	Poland	2	0.2
34	Romania	2	0.2
35	Brazil	1	0.1
36	Libya	1	0.1
37	Norway	1	0.1
38	Palestine	1	0.1
39	Portugal	1	0.1
40	Russia	1	0.1
41	Total	882	100

Table VII.
Contributors'
geographical location

($C = 216$, 24.5 per cent), AIS region 3 – Australia and New Zealand ($C = 103$, 11.7 per cent) and AIS region 3 – South Korea, Singapore, Hong Kong, Taiwan, China, Japan, India ($C = 75$, 8.5 per cent). The other three AIS regions are also illustrated in Table VIII.

Previous studies that have reviewed specific journals like *ISJ* (Avison *et al.*, 2008), *JECR* (Dwivedi *et al.*, 2008) and *ISF* (Dwivedi *et al.*, 2009) show that regions such as South America, the Middle East, the Former Soviet Union and many underdeveloped countries of Asia are under-represented in terms of undertaking and publishing IS and

Geographical region (AIS classification)	Count	Per cent
AIS-R2 – Europe and UK	450	51.0
AIS-R1 – USA and Canada	216	24.5
AIS-R3 – Australia and New Zealand	103	11.7
AIS-R3 – South Korea, Singapore, Hong Kong, Taiwan, China, Japan, India	75	8.5
AIS-R2 – Middle East and Africa	19	2.2
AIS-R3 – Other	18	2.0
AIS-R1 – Other (Latin American and South American countries)	1	0.1
Total	882	100

electronic commerce research. This study identifies a similar pattern (Tables VII and VIII). This skewed representation raises an important research agenda for IS researchers to investigate: whether this situation is a consequence of a global IS digital divide or whether it is due to a lack of interest or lack of necessary expertise to undertake IS research within such countries (Dwivedi *et al.*, 2008, 2009). In either case, the problem of a potential global IS divide needs to be investigated and academics from countries such as the USA, UK, Australia, Hong Kong, Taiwan, Korea, and European countries should consider collaboration with researchers from under-represented regions in order to undertake more fruitful research which is critical to the global emergence of IS (Dwivedi *et al.*, 2008, 2009).

Such unequal distribution of research output in various journals raises question on the appropriateness of using the AIS regions for geographical comparison of research output. Dwivedi *et al.* (2008, 2009) argued that researchers should divide the AIS region 2 into three sub-divisions, namely European regions, the Middle East and Africa. Similarly, the AIS region 1 should be divided into North and South America, and the AIS region 3 should be divided into the Pacific Region (Australia and New Zealand), active Asian nations such as Singapore, Hong Kong, South Korea, Japan, Taiwan, China, and India, and comparatively less-active Asian regions such as Afghanistan, Bangladesh, Cambodia, Indonesia, Malaysia, Nepal, Pakistan, Sri Lanka, Thailand, and many other countries. Without such finer divisions, it will not be possible to develop a clear picture of the regional growth of IS and electronic commerce practice and research (Dwivedi *et al.*, 2008, 2009). Profiling of *JECR* (Dwivedi *et al.*, 2008), *ISF* (Dwivedi *et al.*, 2009) and *JEIM* provides empirical evidence that it might be more appropriate to follow the modified classification scheme described above for the purpose of future research.

3.7 Types of publications
The 381 *JEIM* publications in our data-set are now categorised according to their publication type. These publication types have been identified by the publisher of this journal – Emerald. The data presented in Table IX illustrate that a vast majority of the publications are "research papers" ($C = 307$), followed by "case study" and "viewpoint" papers. The remaining categories with their associated frequency are presented in Table IX.

3.8 Research methods

The findings suggest that although a total of 14 different research methods were recorded from our data analysis, the majority of studies employed conceptual/descriptive/theoretical methods ($C = 120$, 31.5 per cent), followed by case study ($C = 95$, 24.9 per cent) and survey ($C = 64$, 16.8 per cent) methods. The other categories with their associated counts and percentage are presented in Table X.

3.9 Keyword analysis: popular keywords

A total of 1,576 keywords were extracted from the 381 *JEIM* publications in our data set. The objective was to identify the most frequently used keywords. A total of 61 keywords were used five or more times. These 61 keywords, along with their frequency, are listed in Table XI. "information systems" ($C = 74$), "electronic commerce" ($C = 48$) and "internet" ($C = 43$) were three most frequently used keywords, followed by "logistics" and "supply chain management", each having 38 occurrences. The trend of keyword use suggests that *JEIM* is a leading outlet of research in the area of IS, electronic commerce, logistics and supply chain management, knowledge management, outsourcing, business process re-engineering and integration.

Types of publications	Frequency	Per cent
Research paper	307	80.6
Case study	19	5.0
Viewpoint	16	4.2
Conceptual paper	15	3.9
Literature review	11	2.9
General review	8	2.1
Technical paper	5	1.3
Total	381	100

Table IX.
Classification of *JEIM*
publications according
to publisher (Emerald)
categories

Research methods	Count	Per cent
Conceptual/descriptive/theoretical	120	31.5
Case study	95	24.9
Survey	64	16.8
Interview	22	5.8
Analytical[a]	21	5.5
Viewpoint/commentary	16	4.2
Design research	11	2.9
Secondary data analysis	9	2.4
Mixed	8	2.1
Experiment	5	1.3
Content analysis	5	1.3
Action research	2	0.5
Focus group	2	0.5
Meta-analysis	1	0.3
Total	381	100.0

Note: [a]This category includes various methods such as simulation, algorithm, mathematical modelling

Table X.
Research methods
employed

Keywords	Frequency
IS	74
Electronic commerce	48
Internet	43
Logistics	38
Supply chain management	38
Information technology	34
Communication technologies	29
Manufacturing resource planning	29
Decision making	21
Small to medium-sized enterprises	18
Information management	17
Risk management	16
Knowledge management	15
Outsourcing	15
Supply chain	15
Modelling	14
BPR/business process re-engineering	14
Integration	13
Government	11
Innovation	10
Simulation	10
Supply-chain management	10
Construction industry	8
Distribution management	8
Health care	8
Project management	8
Australia	7
Computer security	7
Computer software	7
Greece	7
Malaysia	7
Management	7
Organizational change	7
Process management	7
Purchasing	7
United Kingdom	7
Value chain	7
Business planning	6
Case studies	6
Communication	6
Customer relations	6
Electronic data interchange	6
Implementation	6
Information	6
Investment	6
Security	6
Small-to-medium-sized enterprises	6
Supplier relations	6
Suppliers	6
Worldwide web	6
	(*continued*)

Table XI.
Most frequently used keywords

Keywords	Frequency
Change management	5
China	5
Construction management	5
Contingency planning	5
Customer satisfaction	5
Design	5
Evaluation	5
Fuzzy logic	5
Germany	5
Strategy	5
Supplier evaluation	5

3.10 Citation analysis

Citation analysis was conducted to determine the research impact of the most influential authors and studies. Citation data pertaining to all 381 *JEIM* papers were extracted from Google Scholar on May 1, 2009. This data were subsequently updated on June 13, 2009. Data obtained from Google Scholar on total citation count per paper suggests that 56 papers received 20 or more citations, 46 papers received between ten and 19 citations, and two sets of 17 papers were cited nine times and eight times, respectively. Citation frequencies for remaining papers are presented in Table XII. In total, 21 studies with larger values of citation counts from each year are listed in Table XII which includes study with largest count by Beamon (1999) with a 170 citation count (as per Google Scholar). As noted by Dwivedi *et al.* (2008, 2009), older papers are more likely to have larger numbers of citations, while newer papers are likely to possess lower citation counts. This can be shown by the fact that papers possessing the largest number of citations were published in early volumes of *JEIM* and very few of the papers from a relatively recent volume had a large citation count. This is not an exceptional case as similar tread was identified by previous studies, including the profiling of the *JECR* (Dwivedi *et al.*, 2008) and *ISF* (Dwivedi *et al.*, 2009). A brief discussion on papers with more than 30 citations is provided below.

Five articles that appeared in the year 1999 received high citation counts. Among these five papers, four appeared in a special issue (Vol. 12 No. 1) on "Methodological aspects of IT/IS investment decision making" (Guest Editor, Zahir Irani). The issues addressed in these four papers included participative evaluation (Remenyi and Sherwood-Smith, 1999), understanding IS business value (Cronk and Fitzgerald, 1999), comparative study on evaluation practices of capital investment (Ballantine and Stray, 1999) and rethinking the approaches to IS investment evaluation (Serafeimidis and Smithson, 1999). The high-citation count may reflect the interest generated in this topic within IS academics. This may be due to the high level of project failures that were reported in the news (LASCAD, TARUS, etc.) and which might have attracted IS academics to focus and rethink on IS evaluation related topics and associated methodological practices. Another notable contribution that appeared in the year 1999 is a viewpoint paper on designing the green supply chain (Beamon, 1999). This has received the largest citation counts ($C = 170$) amongst all the 381 publications analysed by us. The reason for this is that green IT is now enjoying substantial attention from IS academics. However, it is to be noted that in the year 1999 it was not

Citation counts	Number of studies
170	1
82	1
75	1
66	1
63	1
60	2
58	1
56	1
55	1
50	1
46	3
45	2
42	1
41	1
40	1
38	1
34	1
33	1
32	3
31	2
30	2
29	3
28	1
26	2
24	2
23	3
22	4
21	6
20	6
19	3
18	2
17	2
16	1
15	5
14	5
13	5
12	10
11	6
10	7
9	17
8	17
7	19
6	16
5	20
4	25
3	26
2	27
1	42
0	70
Total	381

Table XII.
Frequency of citation
counts of *JEIM* papers

Source: Accessed May 1, 2008, updated on June 13, 2008

a mature topic and the journal is to be commended for publishing such novel and timely topic. Such viewpoints act as thought stimulators and are subsequently read by an increasing number of scholars.

Five articles from year 2000 that received high citation counts were clearly focussed on supply chain-related issues (Childerhouse and Towill, 2000), were related to the internet (Angeles, 2000) or electronic data interchange (Chapman *et al.*, 2000), dealt with business process re-engineering (Irani *et al.*, 2000) and associated technology such as enterprise resource planning (ERP; Al-Mashari and Zairi, 2000). It is notable that there are five publications (Allen and Fjermestad, 2001; Bhatt and Emdad, 2001; Tetteh and Burn, 2001; van Hooft and Stegwee, 2001; Warkentin *et al.*, 2001) from same issue (Vol. 14 Nos. 1/2) within this list of most cited papers. The reason for this might be the timeliness of these publications. These five papers appeared in early 2001 issue and all dealt with e-commerce/e-business-related issues which nearly coincided with exit of dotcom "boom and bust" phase. This was the time when many practitioners and academics were keen to find out the reasons for the dotcom bust and to learn lessons from them. Consequently, researchers and academics published a large number of studies in a very short period of time and cited any existing study on this topic published during that period. This has implications for editors, reviewers and authors because any publication on emerging topics is likely to yield high number of citations and therefore should be considered important by authors in terms of examining such issues and by editors and reviewers in terms of providing opportunity to get such research published.

A conceptual paper by Baskerville and Siponen (2002) on information security meta-policy for emergent organizations was the only paper from the year 2002 which received a high citation counts (30 or more citations). Clearly, this paper has addressed one of the very timely topics and has provided policy implications to emergent organisations. This has made the paper popular among many researchers since it provides them an opportunity to validate such theoretical arguments with empirical data. There are a total of four papers – including two papers (Cebi and Bayraktar, 2003; Kahraman *et al.*, 2003) from a special issue from the year 2003 – that appear in the list of most cited papers. Burn and Robins (2003) study on e-government was an early effort in the area of e-government research, it was subsequently cited by a number of studies that appeared within short period of time. Similarly, a strong interest emerged for undertaking research in the area of SMEs, particularly adoption of information and communication technologies (ICTs). The study conducted by Shiels *et al.* (2003) is an early effort in this area and this makes it a favourite for researchers to cite it in subsequent studies. A total of four papers that were published in 2004 and 2005 appear in the list of most cited papers. The themes of these papers are supply chain (Davenport and Brooks, 2004; Jharkharia and Shankar, 2005) and related areas such as electronic marketplace (Stockdale and Standing, 2004) and technology (such as ERP) (Buonanno *et al.*, 2005; Davenport and Brooks, 2004). Among the four papers, three papers focussed upon identifying barriers or factors affecting adoption rate (Table XIII).

The above discussion indicates that in general papers from special issues are likely to be cited more than regular paper. There might be a number of reasons responsible for such a pattern. For example, special issue topics are more timely and topical and generally processed much faster then regular issues papers. A reduced publication

SL	Study	Citation	Number of studies
1	Alshawi (2001); Shiels *et al.* (2003)	30	2
2	Cronk and Fitzgerald (1999); Baskerville and Siponen (2002)	31	2
3	Serafeimidis and Smithson (1999); Irani *et al.* (2000); Allen and Fjermestad (2001)	32	3
4	van Hooft and Stegwee (2001)	33	1
5	Jharkharia and Shankar (2005)	34	1
6	Cebi and Bayraktar (2003)	38	1
7	Stockdale and Standing (2004)	40	1
8	Bhatt and Emdad (2001)	41	1
9	Buonanno *et al.* (2005)	42	1
10	Al-Mashari and Zairi (2000)	45	2
11	Childerhouse and Towill (2000)	46	3
12	Burn and Robins (2003)	50	1
13	Ballantine and Stray (1999)	55	1
14	Chapman *et al.* (2000)	56	1
15	Warkentin *et al.* (2001)	58	1
16	Kahraman *et al.* (2003)	60	2
17	Remenyi and Sherwood-Smith (1999)	63	1
18	Davenport and Brooks (2004)	66	1
19	Tetteh and Burn (2001)	75	1
20	Angeles (2000)	82	1
21	Beamon (1999)	170	1

Source: Accessed May 1, 2009, updated on June 13, 2009

Table XIII.
Most cited (30 or more times) *JEIM* papers

cycle consequently increases the chances of citations. However, we observed an exception to this pattern. Vol. 12 No. 3, 1999 was a special issue on Y2K problem. But because the Y2K scare never really materialised (largely due to the proactive steps taken by the companies who were "doomed" to be affected), these papers have very low citations.

3.11 Most downloaded papers

Table XIV provides the list of top 21 most downloaded article since year 2005. These papers are arranged according to their download frequency (decreasing order). Data presented in Table XIV illustrate that majority of most downloaded papers were published after year 2000. There are only four exceptions to this trend (Ballard 1996; Beamon, 1999; Gunasekaran *et al.* 1999; Harwood 1994). We also mapped data presented in Table XIV with data presented in Table XIII on most cited papers. The last column of Table XIV indicates whether the most downloaded papers are also listed as most cited papers along with their citation frequency (presented in Table XIII). This comparison suggests that only seven most downloaded papers (out of a total of 21) are also most cited papers. The finding suggests that the number of downloads for a particular paper does not necessarily lead to a higher citation count. One of the possible explanations is – an paper might be downloaded for exploring its usefulness for a particular problem but a detail examination of paper may find it irrelevant to the

SL	Paper details (authors and year)	Publication details (Vol., No., pp.)	Download rank	Most cited: Yes or No (Table XIII)
1	Davenport and Brooks (2004)	17, 1, 8-19	1	Yes (citations: 66)
2	Scullin *et al.* (2004)	17, 6, 410-415	2	No
3	Choudrie (2005)	18, 1, 64-78	3	No
4	Hutchinson and Warren (2003)	16, 1, 64-73	4	No
5	Buonanno *et al.* (2005)	18, 4, 384-426	5	Yes (citations: 41)
6	Stockdale and Standing (2004)	17, 4, 301-311	6	Yes (citations: 40)
7	Møller (2005)	18, 4, 483-497	7	No
8	Beamon (1999)	12, 4, 332-342	8	Yes (citations: 170)
9	Hong *et al.* (2006)	19, 3, 320-333	9	No
10	Walters (2006)	19, 3, 246-261	10	No
11	Cebi and Bayraktar (2003)	16, 6, 395-400	11	Yes (citations: 38)
12	Spathis and Ananiadis (2005)	18, 2, 195-210	12	No
13	Gunasekaran *et al.* (1999)	12, 5, 386-394	13	No
14	Kuruppuarachchi *et al.* (2002)	15, 2, 126-137	14	No
15	Pant and Ravichandran (2001)	14, 1, 85-99	15	No
16	Wieder *et al.* (2006)	19, 1, 13-29	16	No
17	Kahraman *et al.* (2003)	16, 6, 382-394	17	Yes (citations: 60)
18	Tetteh and Burn (2001)	14, 1, 171-180	18	Yes (citations: 75)
19	Harwood (1994)	7, 5, 30-35	19	No
20	Ndubisi *et al.* (2005)	18, 3, 330-349	20	No
21	Ballard (1996)	9, 3, 11-18	21	No

Note: Download frequency counted from year 2005 onwards
Source: Emerald Publishing Ltd, July 24, 2009

Table XIV.
Most downloaded (top 21)
JEIM papers

problem domain, hence may not lead to citation. Considering the comparative data presented in Table XIV, the authors recommend that the readers should be cautions when interpreting or linking number of downloads with citation frequency of a scholarly publication.

4. Conclusions
The aim of this paper was to analyse the current state of IS research published in *JEIM* by presenting the results of a systematic and comprehensive review of 381 papers that appeared between the years 1999 and 2008. The paper presented the results along a series of dimensions, for example, most active authors, research impact of published papers, authors' backgrounds, most frequently used keywords, research methodology employed, etc. The followings are the main conclusions that have emerged from the analysis presented in this study:

- In terms of most active authors, the list includes only two authors (Zahir Irani and Peter E.D. Love) who have appeared as most active author in profiling analysis of other leading IS journals including *EJIS* (Dwivedi and Kuljis, 2008) and *I&M* (Palvia *et al.*, 2007).

- A large proportion of *JEIM* authors hold lectureship, followed by professors, associate and assistant professors.

- In terms of the home department of *JEIM* authors, the largest numbers of researchers are from Business and Management discipline followed by MIS/IS

backgrounds, Computer Science and Software Engineering, and Engineering disciplines.

- *JEIM* authorship also includes many practitioners.
- Research published in *JEIM* shows strong collaborative works. The largest numbers of papers are co-authored by two authors, followed by three author contributions. There are a number of papers co-authored by four, five and six authors.
- UK is the single largest contributor of *JEIM* authors and their institutions. Consecutively, AIS-R2 – Europe and UK emerged as the most dominant region, followed by AIS-R1 – USA and Canada.
- The descriptive/theoretical/conceptual methods, followed by case study and survey, were the most dominant research methods utilised by *JEIM* authors within the span of our study.
- Analysis indicated that "information systems", "electronic commerce", "internet", "logistics" and " supply chain management" were the most frequently utilised keywords.
- The highest research impact is reported for the paper published by Beamon (1999), followed by Angeles (2000) and Tetteh and Burn (2001). The research impact was assessed by citations obtained from Google Scholar for all papers published in *JEIM*.

We anticipate that *JEIM* readers will find this paper a useful source of information, especially if they wish to learn more about the various facets pertaining to the existing body of published IS research in *JEIM*.

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