Most Popular Theories in Information Systems Research

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ABSTRACT
The objective of this work is to identify the theories most widely applied in information systems research. In order to achieve this purpose, an exploration of literature 2015 is realized, based on co-citation analysis. Results indicate that Dynamic Capabilities Theory appears as main in the discussion of information systems research.

Categories and Subject Descriptors
K.6.m [Management of Computing and Information Systems]: Miscellaneous.

General Terms
Management, Theory

Keywords
Co-citation analysis, Theories, Information Systems, Research.

1. INTRODUCTION
Information Systems is a new discipline with its own accumulative tradition and history[1]. To progress in the understanding of the information systems, it is necessary to conduct research built on theory. Indeed, information systems have an important tradition of developing and appropriating theories to examine main disciplinary topics [2].

As the discipline matures, total of new articles published every year increases. Consequently, the identification of the most widely used theoretical fundamentals becomes a formidable task for those students interested in the discipline[3].

In this context, the objective of this study is to identify the theories most widely applied in information systems research from the literature of the year 2015.

The remaining of the paper is organized as follows. Section 2 presents briefly the methodology. Section 3 presents the results. Finally, section 4 discusses the results.

2. DATA AND METHODOLOGY
The data collected on citations obtained from the Journal Citation Reports at Thomson-Reuters’ Web of Science (formerly ISI Citation Index). In particular, articles from journals of the discipline belong to the category of Web of Science management were considered. These journals were identified using data from the Index of Information Systems Journals [4] as in January 2016. Finally, 3,035 articles published in 2015 in 52 ISI journals were obtained (see annex).

In order to obtain the most relevant authors in the literature 2015, a co-citation analysis was performed. It was used in VOSviewer software for this purpose. VOSviewer has been developed for creating, visualizing, and exploring bibliometric maps of science (see http://www.vosviewer.com/).

A total of 113,426 citations were identified. For analysis with VOSviewer, the authors cited 100 times or more were considered. Within that list of authors, the authors associated with techniques were eliminated. Finally, each author was associated with a theory, based on the specific articles cited and a literature review [2].

3. RESULTS
Below we show the main results of bibliometric analysis of literature. Figure 1 shows the result in relation to journals cited five or more times.

Figure 1. Journals most widely cited
Figure 2 shows the result in relation to cooperation between authors from different countries.

![Figure 2. Cooperation between countries](image1)

Figure 3 shows the result in relation to cooperation between authors from different institutions.

![Figure 3. Cooperation between institutions](image2)

Figure 4 shows the result of the co-citation analysis. Table 1 shows these authors and theories associated with them.

![Figure 4. Co-citation analysis](image3)

### Table 1. Authors and theories

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Theory</th>
<th>Author</th>
<th>Cites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dynamic capabilities</td>
<td>Eisenhardt, KM</td>
<td>258</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teece, DJ</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td>Transaction cost economics</td>
<td>Williamson, OE</td>
<td>144</td>
</tr>
<tr>
<td></td>
<td>Absorptive capacity theory</td>
<td>Cohen, WM</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>Competitive strategy</td>
<td>Porter, ME</td>
<td>136</td>
</tr>
<tr>
<td></td>
<td>Resource-based view of the firm</td>
<td>Barney, J</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>Knowledge-based theory of the firm</td>
<td>Nonaka, I</td>
<td>161</td>
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<tr>
<td></td>
<td></td>
<td>Grant, RM</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kogut, B</td>
<td>104</td>
</tr>
<tr>
<td></td>
<td>General theory of entrepreneurship</td>
<td>Shane, S</td>
<td>102</td>
</tr>
<tr>
<td>2</td>
<td>Sense making theory</td>
<td>Weick, KE</td>
<td>173</td>
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<tr>
<td></td>
<td>Administrative behavior theory</td>
<td>Simon, HA</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>Organizational learning theory</td>
<td>March, JG</td>
<td>122</td>
</tr>
<tr>
<td></td>
<td>Prospect theory</td>
<td>Kahneman, D</td>
<td>120</td>
</tr>
<tr>
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<td>Contingency theory</td>
<td>Miller, D</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>Resource dependency theory</td>
<td>Pfeffer, J</td>
<td>101</td>
</tr>
<tr>
<td>3</td>
<td>Unified theory of acceptance and use of technology</td>
<td>Venkatesh, V</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>Cultural dimensions theory</td>
<td>Hofstede, G</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>Theory of planned behavior</td>
<td>Ajzen, I</td>
<td>102</td>
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</tbody>
</table>

4. DISCUSSION

This paper presented the initial results of an exploration of the literature of information systems in 2015, with focus in find the most-used theories.


This research will continue to examination the results presented in detail, and in particular, how these findings relate to other studies published in the literature on theories in information systems.
REFERENCES


ANNEX: JOURNALS LIST

1. Academy of Management Journal
2. Academy of Management Learning Education
3. Academy of Management Perspectives
4. Academy of Management Review
5. Administrative Science Quarterly
6. Australian Journal of Management
8. California Management Review
9. Decision Analysis
10. Electronic Commerce Research
11. European Journal of Operational Research
12. Group Decision and Negotiation
13. Group Organization Management
15. IEEE Transactions on Engineering Management
16. Information and Organization
17. Information Management
18. Information Systems and E Business Management
19. Information Systems Research
20. Information Technology Management
21. Interfaces
22. International Journal of Accounting Information Systems
23. International Journal of Forecasting
26. Journal of Information Technology
27. Journal of Knowledge Management
28. Journal of Management Information Systems
30. Journal of Organizational and End User Computing
31. Journal of Organizational Behavior
32. Journal of Organizational Change Management
33. Journal of Service Management
34. Journal of Strategic Information Systems
35. Journal of Supply Chain Management
36. Journal of Technology Transfer
37. Journal of the Operational Research Society
38. Knowledge Management Research Practice
39. Management Communication Quarterly
40. Management Science
41. MIT Sloan Management Review
42. New Technology Work and Employment
43. Omega International Journal of Management Science
44. Organizational Behavior and Human Decision Processes
45. Project Management Journal
46. Science Technology and Society
47. Small Group Research
48. Strategic Management Journal
49. Systemic Practice and Action Research
50. Systems Research and Behavioral Science
51. Technovation
52. Total Quality Management Business Excellence