

Document details

< Back to results | 1 of 11 Next >

Export Download Print E-mail Save to PDF Add to List More... >

[Full Text](#) View at Publisher

2nd International Conference on Computer Science and Engineering, UBMK 2017
 31 October 2017, Article number 8093455, Pages 532-537
 2nd International Conference on Computer Science and Engineering, UBMK 2017; Antalya; Turkey; 5 October 2017 through 8 October 2017; Category number CFP1635T-ART; Code 132116

The trend of business intelligence adoption and maturity (Conference Paper)

Qushem, U.B.^a , Abubakar, A.^a , Zeki, A.M.^a , Akleylek, S.^b

^aDepartment of Information Systems, International Islamic University Malaysia, Kuala Lumpur, Malaysia

^bDepartment of Computer Engineering, Ondokuz Mayis University, Samsun, Turkey

Abstract

View references (62)

In this paper, the trend of Business Intelligence (BI) adoption and maturity has been evaluated. Special emphasis was given to the small-to-medium enterprises (SME) business adoption and intensive review of BI maturity model in for the contemporary business world. Therefore, this study surveyed research works that reveal most determinants for BI efficiency. The survey has extract what lead organization to a better understanding of development and testing of BI framework. The study has found out that BI adoption has been highly related to Information and Communication Technology (ICT) tool utilization. Moreover, the success of BI to business are observed when users are able to leverage the best use of their data, by summarizing and aggregating information for business goals. Thus, understanding the fact, an investigation has been approached to identify BI adoption trends towards companies using BI. Results revealed that technology company, as well as a Production company, took the highest in BI adoption. © 2017 IEEE.

Author keywords

BI Adoption BI Maturity BI Success Data Mining Data Processing

Indexed keywords

Engineering controlled terms: Data mining Data processing Information analysis Surveys

Compendex keywords: Business goals Development and testing Information and Communication Technologies
 Maturity model Production companies Small to medium enterprise Technology companies

Engineering main heading: Data handling

ISBN: 978-153860930-9

Source Type: Conference Proceeding

Original language: English

DOI: 10.1109/UBMK.2017.8093455

Document Type: Conference Paper

Sponsors:

Publisher: Institute of Electrical and Electronics Engineers Inc.

References (62)

[View in search results format >](#)

All

Export

Print

E-mail

Save to PDF

Create bibliography

Metrics

0 Citations in Scopus

0 Field-Weighted Citation Impact



PlumX Metrics

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)

[Set citation feed >](#)

Related documents

Successful Business Intelligence System for SME: An Analytical Study in Malaysia

Qushem, U.B. , Zeki, A.M. , Abubakar, A. (2017) *IOP Conference Series: Materials Science and Engineering*

Assessing organizational business intelligence maturity

Ong, I.L. , Siew, P.H. , Wong, S.F. (2011) *2011 International Conference on Information Technology and Multimedia: "Ubiquitous ICT for Sustainable and Green Living", ICIM 2011*

Theoretical framework of critical success factors (CSFs) for Business Intelligence (BI) System

Magaireah, A.I. , Sulaiman, H. , Ali, N. (2017) *ICIT 2017 - 8th International Conference on Information Technology, Proceedings*

1 Lee, C.K.M., Lau, H.C.W., Ho, G.T.S., Ho, W.

Design and development of agent-based procurement system to enhance business intelligence

(2009) *Expert Systems with Applications*, 36 (1), pp. 877-884. Cited 39 times.
doi: 10.1016/j.eswa.2007.10.027

[View at Publisher](#)

[View all related documents based on references](#)

2 Evelson, B.

(2012) *Top 10 BI Predictions for 2013 and Beyond*. Cited 3 times.
Online

http://blogs.forrester.com/boris_evelson/12-12-12-top_10_bi_predictions_for_2013_and_beyond

[Find more related documents in Scopus based on:](#)

[Authors >](#) [Keywords >](#)

3

(2013) *Gartner Says Worldwide Business Intelligence Software Revenue to Grow 7 Percent in 2013*. Cited 7 times.
Online
[Gartner](#)

4

(2013) *CIO Magazine Tech Poll/tech Priorities Survey*. Cited 2 times.
IDG Enterprise, Online
<http://www.cio.com/documents/pdfs/CIOTechPrioritiesFeb2013.pdf>

5

Levy, Y., Ellis, T.J.

A systems approach to conduct an effective literature review in support of information systems research

(2006) *Informing Science*, 9, pp. 181-211. Cited 349 times.
<http://inform.nu/Articles/Vol9/V9p181-212Levy99.pdf>

[View at Publisher](#)

6

Heeks, R.

(2002) *Failure, Success and Improvisation of Information Systems Projects in Developing Countries*. Cited 58 times.

7

Hartley, K., Seymour, L.F.

Towards a framework for the adoption of Business Intelligence in public sector organisations: The case of South Africa

(2011) *ACM International Conference Proceeding Series*, pp. 116-122. Cited 8 times.
ISBN: 978-145030878-6
doi: 10.1145/2072221.2072235

[View at Publisher](#)

8

Bucher, T., Gericke, A., Sigg, S.

Process-centric business intelligence

(2009) *Business Process Management Journal*, 15 (3), pp. 408-429. Cited 59 times.
doi: 10.1108/14637150910960648

[View at Publisher](#)

9

Msimang, M.

(2008) *Government-wide ICT Infrastructure: The South African Experience*
Public Sector ICT Infrastructure Forum, Nigeria, Abuja

-
- 10 Pretorius, D., Schurink, W.J.
(2007) *Enhancing Service Delivery in Local Government: The Case of a District Municipality*

-
- 11 Hartley, K., Seymour, L.F.
Towards a framework for the adoption of Business Intelligence in public sector organisations: The case of South Africa
(2011) *ACM International Conference Proceeding Series*, pp. 116-122. Cited 8 times.
ISBN: 978-145030878-6
doi: 10.1145/2072221.2072235

[View at Publisher](#)

-
- 12 Rahman, S.
The impact of adopting "business intelligence (BI)"
(2011) *Organizations*

-
- 13 Olexová, C.
Business intelligence adoption: A case study in the retail chain
(2014) *WSEAS Transactions on Business and Economics*, 11 (1), pp. 95-106. Cited 7 times.
<http://www.wseas.org/multimedia/journals/economics/2014/a185707-163.pdf>

-
- 14 Crossland, M.
(2010) *How Business Intelligence is Adding Business Value*. Cited 3 times.
University of Cape Town. Retrieved from
<https://books.google.com.my/books?id=ot-LXwAACAAJ&on2016>

-
- 15 Davis, J., Miller, G.J., Russell, A.
(2006) *Information Revolution: Using the Information Evolution Model to Grow Your Business*, 4. Cited 24 times.
John Wiley & Sons

-
- 16 (2010) *Business Intelligence and Performance Management for the 21st Century*. Cited 2 times.
Ventana Research, Pleasanton, CA, Apr. 2010

-
- 17 Ong, I.L., Siew, P.H., Wong, S.F.
Assessing organizational business intelligence maturity
(2011) *2011 International Conference on Information Technology and Multimedia: "Ubiquitous ICT for Sustainable and Green Living"*, ICIM 2011, art. no. 6122732. Cited 2 times.
ISBN: 978-145770989-0
doi: 10.1109/ICIMU.2011.6122732

[View at Publisher](#)

-
- 18 Davenport, T.H., Harris, J.G.
(2007) *Competing on Analytics: The New Science of Winning*. Cited 545 times.
Harvard Business Press

19 Sen, A., Sinha, A.P., Ramamurthy, K.

Data warehousing process maturity: An exploratory study of factors influencing user perceptions

(2006) *IEEE Transactions on Engineering Management*, 53 (3), pp. 440-455. Cited 31 times.
doi: 10.1109/TEM.2006.877460

[View at Publisher](#)

20 Hostmann, B.

BI competency centres: Bringing intelligence to the business
(2007) *Business Performance Management*, 5 (4), pp. 4-10. Cited 6 times.

21 (2009) *The HP Business Intelligence Maturity Model: Describing the BI Journey*. Cited 21 times.

Online

HP

22 Eckerson, W.

(2007) *TDWI Benchmark Guide: Interpreting Benchmark Scores Using TDWI's Maturity Model*, pp. 3-14. Cited 8 times.
TDWI Research

23 Yeoh, W., Koronios, A., Gao, J.

Critical success factors for the implementation of business intelligence system in engineering asset management organisations

(2006) *Proceedings of the 1st World Congress on Engineering Asset Management, WCEAM 2006*, pp. 344-351. Cited 7 times.
ISBN: 1846285836; 978-184628583-7

[View at Publisher](#)

24 Scholz, P., Schieder, C., Kurze, C., Gluchowski, P., Boehringer, M.

Benefits and challenges of business intelligence adoption in small and medium-sized enterprises

(2010) *18th European Conference on Information Systems, ECIS 2010*. Cited 13 times.
ISBN: 978-062047172-5

25 Moss, L., Atre, S.

Business intelligence roadmap
(2003) *The Complete Lifecycle for Decision-support Applications*
Boston: Addison-Wesley

26 Yeoh, W., Koronios, A.

Critical success factors for business intelligence systems

(2010) *Journal of Computer Information Systems*, 50 (3), pp. 23-32. Cited 142 times.

27 Wixom, B.H., Watson, H.J.

An empirical investigation of the factors affecting data warehousing success

(2001) *MIS Quarterly: Management Information Systems*, 25 (1), pp. 17-41. Cited 717 times.

[View at Publisher](#)

28 Ang, J., Teo, T.S.H.

Management issues in data warehousing: insights from the Housing and Development Board

(2000) *Decision Support Systems*, 29 (1), pp. 11-20. Cited 48 times.
doi: 10.1016/S0167-9236(99)00085-8

[View at Publisher](#)

29 Hwang, H.-G., Ku, C.-Y., Yen, D.C., Cheng, C.-C.

Critical factors influencing the adoption of data warehouse technology: A study of the banking industry in Taiwan

(2004) *Decision Support Systems*, 37 (1), pp. 1-21. Cited 105 times.
doi: 10.1016/S0167-9236(02)00191-4

[View at Publisher](#)

30 Herrmann, C.

Exploring the structural dimension of data warehouse organizations: Results of a survey and implications
(2004) *Proceedings of the IFIP TC8/WG8.3 International Conference, Tuscany*. Cited 4 times.

31 Little Jr., R.G., Gibson, M.L.

Perceived influences on implementing data warehousing

(2003) *IEEE Transactions on Software Engineering*, 29 (4), pp. 290-296. Cited 18 times.
doi: 10.1109/TSE.2003.1191794

[View at Publisher](#)

32 Knox, M.

(2004) *Asset Managers Are Building Their BI Environments*. Cited 3 times.
Gartner Research, April

33 Yeoh, W., Gao, J., Koronios, A.

Towards a critical success factor framework for implementing business intelligence systems: A Delphi study in engineering asset management organizations

(2008) *IFIP International Federation for Information Processing*, 255, pp. 1353-1367. Cited 4 times.
ISBN: 978-0-38776311-8
doi: 10.1007/978-0-387-76312-5_64

[View at Publisher](#)

34 Adamala, S., Cidrin, L.

(2011) *Key Success Factors in Business Intelligence*. Cited 2 times.

35 Porter, M.E., Millar, V.E.

(1985) *How Information Gives You Competitive Advantage*. Cited 62 times.

36 Zhu, K., Kraemer, K.L., Xu, S., Dedrick, J.

Information technology payoff in E-Business environments: An international perspective on value creation of E-Business in the financial services industry

(2004) *Journal of Management Information Systems*, 21 (1), pp. 17-54. Cited 343 times.

[View at Publisher](#)

- 37 Chatterjee, D., Grewal, R., Sambamurthy, V.
Shaping up for E-commerce: Institutional enablers of the organizational assimilation of Web technologies
(2002) *MIS Quarterly: Management Information Systems*, 26 (2), pp. 65-90. Cited 473 times.
[View at Publisher](#)
-
- 38 Armstrong, C.P., Sambamurthy, V.
Information Technology Assimilation in Firms: The Influence of Senior Leadership and IT Infrastructures
(1999) *Information Systems Research*, 10 (4), pp. 304-327. Cited 537 times.
<http://isr.journal.informs.org/>
doi: 10.1287/isre.10.4.304
[View at Publisher](#)
-
- 39 Tallon, P.P., Kraemer, K.L., Gurbaxani, V.
Executives' perceptions of the business value of information technology: A process-oriented approach
(2000) *Journal of Management Information Systems*, 16 (4), pp. 145-173. Cited 563 times.
<http://www.tandfonline.com/loi/mmis20>
doi: 10.1080/07421222.2000.11518269
[View at Publisher](#)
-
- 40 Mahmood, M.A., Soon, S.K.
A Comprehensive Model for Measuring the Potential Impact of Information Technology on Organizational Strategic Variables
(1991) *Decision Sciences*, 22 (4), pp. 869-897. Cited 119 times.
doi: 10.1111/j.1540-5915.1991.tb00368.x
[View at Publisher](#)
-
- 41 Gopalakrishnan, S., Damanpour, F.
Patterns of generation and adoption of innovation in organizations: Contingency models of innovation attributes
(1994) *Journal of Engineering and Technology Management*, 11 (2), pp. 95-116. Cited 100 times.
doi: 10.1016/0923-4748(94)90001-9
[View at Publisher](#)
-
- 42 Premkumar, G., Ramamurthy, K.
The Role of Interorganizational and Organizational Factors on the Decision Mode for Adoption of Interorganizational Systems
(1995) *Decision Sciences*, 26 (3), pp. 303-336. Cited 456 times.
doi: 10.1111/j.1540-5915.1995.tb01431.x
[View at Publisher](#)
-
- 43 Rogers, E.M.
(1995) *Diffusion of Innovations* the Free Press. Cited 53 times.
New York
-
- 44 Boonsiritomachai, W., McGrath, M., Burgess, S.
A research framework for the adoption of business intelligence by small and medium-sized enterprises
(2014) *Small Enterprise Association of Australia and New Zealand 27th Annual Seaanz Conference*. Cited 3 times.

- 45 Uçaktürk, A., Uçaktürk, T., Yavuz, H.
Possibilities of usage of strategic business intelligence systems based on databases in agile manufacturing
(2015) *Procedia-social and Behavioral Sciences*, 207, pp. 234-241. Cited 3 times.

-
- 46 Popović, A., Turk, T., Jaklič, J.
Conceptual model of business value of business intelligence systems
(2010) *Management*, 15 (1), pp. 5-29. Cited 36 times.
http://www.efst.hr/management/Vol15No1-2010/1-Popovic_Turk_Jaklic-final.pdf

-
- 47 Tornatzky, Louis G., Klein, Katherine J.
INNOVATION CHARACTERISTICS AND INNOVATION ADOPTION-IMPLEMENTATION: A META-ANALYSIS OF FINDINGS.
(1982) *IEEE Transactions on Engineering Management*, EM-29 (1), pp. 28-45. Cited 1480 times.
[View at Publisher](#)

-
- 48 Jeyaraj, A., Rottman, J.W., Lacity, M.C.
A review of the predictors, linkages, and biases in IT innovation adoption research
(2006) *Journal of Information Technology*, 21 (1), pp. 1-23. Cited 434 times.
doi: 10.1057/palgrave.jit.2000056
[View at Publisher](#)

-
- 49 Kwon, T.H., Zmud, R.W.
Unifying the fragmented models of information systems implementation
(1987) *Critical Issues in Information Systems Research*, pp. 227-251. Cited 827 times.
John Wiley & Sons, Inc

-
- 50 Yeoh, W., Koronios, A.
Critical success factors for business intelligence systems
(2010) *Journal of Computer Information Systems*, 50 (3), pp. 23-32. Cited 142 times.

-
- 51 McCormack, K., Willems, J., Van Den Bergh, J., Deschoolmeester, D., Willaert, P., Indihar Stemberger, M.
A global investigation of key turning points in business process maturity
Business Process Management Journal
in press

-
- 52 Hawking, P., Sellitto, C.
Business Intelligence (BI) critical success factors
(2010) *ACIS 2010 Proceedings - 21st Australasian Conference on Information Systems*. Cited 26 times.
<http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1103&context=acis2010>

-
- 53 Malhotra, Y.
Why knowledge management systems fail: Enablers and constraints of knowledge management in human enterprises
(2004) *Handbook on Knowledge Management*, 1, pp. 577-599. Cited 99 times.
Springer Berlin Heidelberg

54 Chen, I.J., Popovich, K.

Understanding customer relationship management (CRM): People, process and technology

(2003) *Business Process Management Journal*, 9 (5), pp. 672-688. Cited 377 times.
doi: 10.1108/14637150310496758

[View at Publisher](#)

55 Aladwani, A.M.

Change management strategies for successful ERP implementation

(2001) *Business Process Management Journal*, 7 (3), pp. 266-275. Cited 259 times.
doi: 10.1108/14637150110392764

[View at Publisher](#)

56 Cook, A.C.

(2006) *The Relationship Among Personality Type, User Involvement, and Procedural Justice in Accounting Information Systems Design*

Doctoral dissertation, Nova Southeastern University

57 Tornatzky, L.G., Fleischer, M., Chakrabarti, A.K.

(1990) *Processes of Technological Innovation*. Lexington Books. Cited 912 times.

58 Hameed, M.A., Counsell, S., Swift, S.

A meta-analysis of relationships between organizational characteristics and IT innovation adoption in organizations

(2012) *Information and Management*, 49 (5), pp. 218-232. Cited 40 times.
doi: 10.1016/j.im.2012.05.002

[View at Publisher](#)

59 Ramamurthy, K.(R.), Sen, A., Sinha, A.P.

An empirical investigation of the key determinants of data warehouse adoption

(2008) *Decision Support Systems*, 44 (4), pp. 817-841. Cited 92 times.
doi: 10.1016/j.dss.2007.10.006

[View at Publisher](#)

60 Venkatesh, V., Bala, H.

Adoption and impacts of interorganizational business process standards: Role of partnering synergy

(2012) *Information Systems Research*, 23 (4), pp. 1131-1157. Cited 62 times.
<http://isr.journal.informs.org/content/23/4/1131.full.pdf>
doi: 10.1287/isre.1110.0404

[View at Publisher](#)

61 Bruque-Cámaras, S., Vargas-Sánchez, A., Hernández-Ortiz, M.J.

Organizational determinants of IT adoption in the pharmaceutical distribution sector

(2004) *European Journal of Information Systems*, 13 (2), pp. 133-146. Cited 27 times.
doi: 10.1057/palgrave.ejis.3000490

[View at Publisher](#)

© Copyright 2018 Elsevier B.V., All rights reserved.

[⟨ Back to results](#) | [1 of 11](#) [Next ⟩](#)

[^ Top of page](#)

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

[Privacy matters](#)

Language

[日本語に切り替える](#)

[切换到简体中文](#)

[切换到繁體中文](#)

Customer Service

[Help](#)

[Contact us](#)

ELSEVIER

[Terms and conditions](#) [Privacy policy](#)

Copyright © 2018 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

Cookies are set by this site. To decline them or learn more, visit our Cookies page.

 RELX Group™