

Models and Management of Elasticity and Openness: Towards Flexible Organizations

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Introduction

Today's competitive world requires organizations to constantly change and adapt themselves to new technologies in order to hold the competitive edge among competitors. This requires them to develop applications by underpinning the recent advances in technology, platforms, architecture and their ability to manage them effectively. Given the importance of such applications, it is not surprising to see an upsurge of research activity in this area to develop applications by various businesses to achieve productivity. The aim is to enable the organizations to become more flexible (adaptive, responsive and agile) at the level of strategy, structure, systems, etc.

This special issue aimed to present theoretical and empirical advancements and their application to real business environment to increase business productivity and to support flexibility in organizations. The special issue covers research topics on *management of elasticity and openness on Cloud, architectures and business protocols, data-centric conceptual frameworks for knowledge management, value creation from Big Data and social networks, methods and strategies to support adaptive, responsive and agile organizations*.

As a result, the special issue includes six high-quality papers accepted after three rounds of review, in which the authors present research findings on transformations and

innovations for improving business productivity from multidisciplinary perspectives. The content of the special issue is organized as follows.

Utsuro et al. in the first paper “An Empirical Analysis on Comparing Market Share with Concerns on Companies measured through Search Engine Suggests” present a method of predicting market share values using search engine data. The authors compare the rates of Web searches for different companies supplying similar products and consider them as concerns of those who search for Web pages. Then, they analyzed whether rates of concerns of those who search for Web pages are correlated with the actual market shares. The authors have conducted an empirical study on determining the optimal correlation between the rates of concerns of those who search for Web pages and the market shares.

Kacani and van Wunnik in the second paper “Using Upgrading Strategy and Analytics to Provide Agility to Clothing Manufacturing Subsidiaries: With a Case Study” investigate the typology of clothing manufacturing subsidiaries located in host territories based on the upgrading strategy and the use of analytics followed by the head office. The authors present a case study methodology based on extensive fieldwork on two subsidiaries, which differ in the strategy followed by respective head offices toward their operational activity in the host economy. By comparing two different strategies, the typology of clothing manufacturing subsidiaries is determined based on the degree of upgrading and the level of agility obtained within the last 20 years. The findings of the study indicate that a clothing manufacturing subsidiary has an active typology when the head office assignment promotes upgrading and uses analytics to bring more flexibility in production.

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Hussain et al. in the third paper “Usability Evaluation of English, Local and Plain Languages to Enhance On-Screen Text Readability: A Use-Case of Pakistan” address issues arising in effective communication, to attain a reader’s attention. The authors have considered different constraints associated with on-screen text readability and legibility, especially due to use of mobile and handheld devices. The paper investigates how to enhance text readability for non-native English speakers who have a basic understanding of English language and speak local languages which are not formally taught in academia. A use case in Pakistan, a country in which English and Urdu are the official languages, and a number of local languages are spoken in different parts of the country, is analyzed and presented. An empirical study is presented based on five usability engineering attributes as a benchmark—efficiency, effectiveness, learnability, memorability and satisfaction. From the results of the analysis, it is observed that the proposed plain language scheme is more efficient, effective, learnable and memorable and achieves a higher satisfaction level.

The forth paper by Abdulla Hussain et al. “Mining Educational Data for Academic Accreditation: Aligning Assessment with Outcomes” deals with studying the usefulness of Big Data, gathered by institutions as potential great value. As this Big Data, which is found in heterogeneous formats and in large volumes, the authors propose a framework to collect, scope and verify this large amount of data. Although the framework is explained in the context of institution accreditation in higher education, the framework can be applied in the fields of health care, finance, marketing, etc. The framework is aimed to reduce human involvement in the collection and analysis of data, for the purpose of accreditation as well as to help verifying the data against a standard set by an accreditation body.

Romano et al. in the fifth paper “Towards Exploiting Social Networks for Detecting Epidemic Outbreaks” address the usefulness of social networks as a valuable source of information for application in health domain. Specifically, the authors investigate the Big Data solutions for early detection of epidemic outbreaks, to support public health officials. The authors have collected a massive dataset of Twitter messages to extract relevant information regarding epidemic outbreaks from different countries in 2011 and showed that there is a considerable variability in the temporal dynamics of Twitter messages from different diseases and that the identification of a suitable source of information, to define a ground truth suitable for the assessment of outbreak detection algorithms, is a challenging task.

The last paper “Business architecture agility as result of process knowledge management” by Kazantsev et al.

presents an approach to facilitating process management via enriched six-sigma methodology and the leading KPIs based on semantic analysis of process-related information. Key terms are selected that serve as special cause indicators of variation in process instance and call Cloud service, which automatically analyzes semantic annotation of concrete process instance. It calculates both standard KPIs and KPIs of knowledge-intensive process to monitor process instance outcomes and performance. In case of potential problems, this service finds an expert in the organization. This novel approach could be used as for “knowledge-intensive” business sectors (such as Research and Development) or in any organization interested in increase its agility.

List of papers of special issue (in order of their appearance) is as follows:

1. Takehito Utsuro, Chen Zhao, Linghan Xu, Jiaqi Li, Yasuhide Kawada. An Empirical Analysis on Comparing Market Share with Concerns on Companies measured through Search Engine Suggests
2. Jolta Kacani and Lucas van Wunnik. Using Upgrading Strategy and Analytics to Provide Agility to Clothing Manufacturing Subsidiaries: With a Case Study
3. Walayat Hussain, Omar Hussain, Farookh Khadeer Hussain, Qasim Khan Muhammad. Usability Evaluation of English, Local and Plain Languages to Enhance On-Screen Text Readability: A Use-Case of Pakistan
4. Mohammed Abdulla Hussain, Mohamed Basel Almourad, Sujith Mathew, Abdullah Hussein. Mining Educational Data for Academic Accreditation: Aligning Assessment with Outcomes
5. Sergio Di Martino Sara Romano, Antonino Mazzeo, Michela Bertolotto, Nattiya Kanhabua, Wolfgang Nejd. Towards Exploiting Social Networks for Detecting Epidemic Outbreaks
6. Nikolay S. Kazantsev, Alexander I. Gromoff, Yulia A. Bilinkis. Business architecture agility as result of process knowledge management

Key Questions

1. What are the benefits of using Cloud-based technologies to support adaptive, responsive, and agile organizations?
2. What methods and strategies are best for achieving management of elasticity and openness on Cloud for knowledge management?
3. How can Big Data and social networks contribute to business intelligence and value creation?