# Web_2.0 and five years since: How the combination of technological and organizational initiatives influences an organization's long-term Web_2.0 performance


CrossMark

DongBack Seo [a], Jung Lee [b],*

[a] Dept. of Management Information Systems, Chungbuk National University, 1 Chungdae-ro, Seowon-Gu, Cheongju, Chungbuk 362-763, Republic of Korea
[b] Bang College of Business, KIMEP University, 4 Abay Avenue, Almaty 050100, Kazakhstan

## ARTICLE INFO

## ABSTRACT

The arrival of social and collaborative software applications (e.g., Facebook and LinkedIn), known as Web_2.0 applications, has provided an opportunity for consumers to express their opinions and knowledge. While consumers use Web_2.0 applications on a daily basis, organizations are struggling to embrace fully functioning Web_2.0 applications for their businesses. The types of initiatives for Web_2.0 and how they affect an organization's use of various Web_2.0 applications are investigated from a long-term perspective. The organizational supports and the efforts needed to implement Web_2.0 applications do not reveal their consequences immediately, so a term of five years between the measure of initiatives and their consequences is considered, and then the results of those organizational efforts are tracked. The initiatives are measured at the building stage of Web_2.0 (i.e., 2009) and performance is measured at a point when the adoption of Web_2.0 has matured (i.e., 2014).

© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

In the mid-2000s, a Web_2.0 application was introduced as an innovative web technology that enabled more interactive and personalized communication among people (Eccleston and Griseri, 2008). It soon elicited the attention of many businesses because of its capability to enhance the relationship between organizations and consumers (Andriole, 2010; Dorn et al., 2007). In short, Web_2.0 is a web application that assists people not only to post their opinions on websites, but to continue to interact and even collaborate with others on their topics of interest (Kim et al., 2009). Social network services, such as Facebook and Twitter, are good examples of such interaction-based applications; YouTube has also transformed its identity from a simple storage platform of numerous videos to a media channel that can specify target consumers with similar interests and perspectives (Berthon et al., 2012; Liu et al., 2011). Given their great potential to build much stronger and highly specified relationships with consumers, the fast and smart adoption of Web_2.0 applications in organizations is considered an integral decision. At present, most major consumer-based organizations have active social media accounts and interact with their consumers through various Web_2.0 applications, such as Facebook, Twitter, and YouTube.

However, which organizations can achieve successful use of Web_2.0 applications remains unclear. Formulating an organization-level strategy to interact with consumers through various Web_2.0 applications was, and still is, a complicated

---

process because of the following reasons: (1) active interactions with consumers through Web_2.0 applications do not directly involve any financial advantage; and (2) a small mistake during the use of applications with consumers can result in significant damage to the reputation of an organization. In the Internet era, even with the efforts of a dedicated online consumer service team, a complaint from one unsatisfied consumer can significantly affect other consumers' decisions. For an organization, building a Web_2.0 application strategy is more than an adoption of a new application; it is a significant organizational level change in communicating and building relationships with consumers (Wirtz et al., 2010).

Hence, in this study, we investigate the types of initiatives for Web_2.0 and how they affect an organization's use of various Web_2.0 applications from a long-term perspective. Since the organizational supports and efforts needed to implement Web_2.0 applications do not reveal their consequences immediately (Shang et al., 2011), we take a term of five years between the measure of initiatives and the consequences, and then track how those organizational efforts have produced results. The initiatives are measured at the building stage of Web_2.0 (i.e., 2009) and performance is measured at the point when the adoption of Web_2.0 has matured (i.e., 2014). The Web_2.0 initiatives are categorized into technological and organizational aspects, and we argue that the initiatives in both aspects are necessary to be successful in the full utilization of Web_2.0 applications.

This study is organized as follows. First, we review literature on Web_2.0 and organizational-level initiatives for its implementation. We also propose a framework that positions organizations according to their levels of technological and organizational initiatives, called Web_2.0 quadrant. We then introduce the main idea of our case study and explain in detail how it was designed and conducted. Then, observations made in stage 1 (2009) and stage 2 (2014) are presented. Finally, we assess the case study's companies' current Web_2.0 utilization performance using the Web_2.0 quadrant. We conclude our study by presenting the contributions, implications and limitations of this research.

## 2. Web_2.0 performance quadrant

### 2.1. Web 2.0 from Web 1.0

When the worldwide web was first introduced, it was used mostly to push information to relatively passive readers, similar to the manner in which newspapers and books were made popular (Castelluccio, 2008). The content of each website was written, edited, and published by a select group of people (Baumann, 2006). The concept of 'ownership' of websites was strong, and the owners were responsible for the content. It was not very interactive as it was mostly used for reading, so users who accessed this kind of website did not participate or contribute in creating the content.

Starting from the mid-2000s, the worldwide web began to implement more interactive applications, offering a function where readers could participate in content creation. These websites were called Web_2.0 websites (O'Reilly, 2006). Using various applications, people could more actively participate in the content creation process (Smith and Rogers, 2008) and share their ideas through websites. It was not simply a development in technology but a great change in the method of communication. It enabled people to easily and effectively collaborate and share knowledge (Gould, 2009). It also stimulated opening of discussions, finding solutions, and aiming at value creation through websites (Cronin, 2009). Cook (2008) identified four distinctive features of Web_2.0 sites, namely, communication, cooperation, collaboration, and connection.

In the last decade, the concept of and studies about Web 2.0 have developed into several streams. First of all, the power of content created by Web 2.0 application users (i.e., user-generated content, UGC) has captured numerous researchers' attention (Chaves et al., 2012). They have intensively discussed what engages users and leads them to use various Web 2.0 applications and create content. For example, Chen et al. (2012) identified the factors influencing the continuous use of Web 2.0 and asserted that user satisfaction and electronic word-of-mouth have a significant influence on the continuous use of Web 2.0 applications. Winter and Kramer (2012) discussed the content selection process of users in the Web 2.0 environment and identified the factors that influence users to select what to read when surrounded by a large amount of content. Furthermore, various related issues such as the digital divide in the content creation process (Brake, 2014), and collective authorship for created content (Santarosa et al., 2014) were simultaneously discussed.

Given that created content has the potential to be saved and managed as knowledge, we have also observed the evolution of another group of studies whose focus has changed from Web 2.0 to knowledge management (Shang et al., 2011). For example, Paroutis and Al Saleh (2009) discussed the factors that motivate people to share their knowledge of various Web 2.0 applications. Sigala and Chalkiti (2014) investigated how people in tourism-related businesses can maximize their capabilities of Web 2.0 in sharing their knowledge. Furthermore, people associate the concept of Web 2.0 to cloud computing technologies in order to emphasize the power of innovation that can dramatically improve business capability (Sultan, 2013). All these studies further highlight the creation capability of Web 2.0 application users.

Finally, another group of Web 2.0 researchers analyzes Web 2.0 performance at the organizational level. They broadly discuss the history, framework, and business model related to Web 2.0 (Allen, 2012) and environmental factors such as culture in relation to Web 2.0 (Lim and Palacios-Marques, 2011). Many of those studies also made efforts to integrate organizational, social, and individual perspectives in Web 2.0-based environments (Wang, 2011) and discussed how the structure of businesses could be modified by Web 2.0 technologies (Adebanjo and Michaelides, 2010). Managerial aspects of Web 2.0 such as control of these technologies (De Hertogh et al., 2011) as well as strategies to make Web 2.0 profitable (Chui and Bughin, 2010) were also considered.