Chapter 21
Past Impact and Future Implications of the World Wide Web on the Accounting Industry

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ABSTRACT

With the initial development of Web 1.0 in 1989, the groundwork was laid out for radical and rapid transformation of an accounting industry which had been slowly evolving over thousands of years. In the late 1990s, with Web 2.0, simple websites and email were eclipsed by innovative accounting software and collaborative online tools. Accountants have taken advantage of these features as many of the lower-level functions are now replaced by value-adding analytics and ongoing communication. The newest version of the World Wide Web, Web 3.0, strives to progress business further with decentralized, blockchain-based applications. Distributed ledger technology, securely storing data in multiple locations with immutable transaction records, is increasing reliability of accounting functions. With smart contracts, business agreements can be executed via blockchain, adding another layer of security. However, the accounting industry is not without challenges as technology advances- it must stand with its ethical principles as the business world around it evolves with Web 3.0.

INTRODUCTION

Ever since the introduction of computers into the accounting world, technological advancement has occurred at what can only be described as a torrid pace (Fahmi et al. 2023). Computer technology was initially used to produce and organize accounting data in a better format than paper-based ledgers. Then came a great leap forward with specialized software that automated some accounting and bookkeeping functions (Kee 1993). However, humans still had to input data into the system to get the computer to update the firm's books.

Things have progressed further with better technology. For the most part, the efficiency, accuracy, and security of accounting systems have been significantly improved (Minan et al 2023). Data-entry functions have become progressively automated, allowing accountants to focus on higher-level, value-adding tasks to better serve their clients. Accountants are now expected to help businesses streamline their operations, engage in sound financial planning, and provide other important insight via regular communications (Samanthi & Gooneratne 2023, Tillema et al. 2022).

Businesses themselves have evolved with web technology. With Web 1.0, they were able to create simple websites with branding, product images and features, and contact information (physical addresses, phone numbers, and emails). They also took advantage of a new way to maintain communications with the customers- emails were undoubtedly more efficient and cost effective compared to mass-mailing flyers or letters.

With Web 2.0, businesses have been able to increase meaningful online interactions with their customers (Mabic et al. 2019; Nath et al. 2010)- there is now online chat, online shopping, even customizable website features which engaged internet surfers can spend hours on. Consumer data has become valuable and e-advertising can now be tailored to the specific needs/preferences of the individual shopper. Of course, this targeting capability has triggered new arguments on ethical usage of user data.

As businesses have evolved, so have their accountants. In addition to providing better services, accounting firms are now able to use technology to deliver higher quality audit, review, and tax preparation outcomes to their clients. The traditional accounting work is not only quicker (and cheaper) but also more accurate. With transition to increased machine use, the impact of human error can be minimized and final documentation can be entrusted at a higher level, resulting in more confident and possibly better business decision-making.

This chapter will take a detailed look at how the accounting industry has evolved alongside the World Wide Web, from Web 1.0 to Web 2.0. There will also be a forward look at Web 3.0 and specific features or products which may significantly impact the modern business world and especially the accounting industry. The potential benefits and risks will be analyzed and some best practices will be suggested.

Literature Review

A significant body of publications have looked into the impact of earlier versions of the World Wide Web, Web 1.0 and Web 2.0, so the findings of a few relevant works will be summarized. Predictably, the number of publications focused on the impact of newer technologies, such as blockchain and Web 3.0, on the accounting industry is considerably smaller- likely due to the relatively short time passing since emergence. However, that is not to say there is not already some quality research available for the accounting industry to utilize and build on going forward.

In an article in The CPA Journal, Cong and Du (2007) described Web 2.0 in a rather creative manner:

"Compared to "Web 1.0." Web 2.0 fills the gap between a web browser and desktop applications, it brings together documents and data scattered over local computers and the Internet, and facilitates collaboration and sharing."

Cong and Du went on to discuss how webpages were evolving into wikis and emailed files were being replaced by collaborative online tools. They cautioned, rightfully, that corporate information systems were combining data from a variety of internal and external sources, making auditing increasingly challenging. However, the two authors also encouraged accounting professionals to "use new Web 2.0 technologies to exchange ideas, share information, and communicate with clients and colleagues."

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