Journal of Strategic Information Systems xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Journal of Strategic Information Systems

journal homepage: www.elsevier.com/locate/jsis

Who delivers the bigger bang for the buck: CMO or CIO?

Joseph Taylor[a,*,1], Joseph Vithayathil[b,1]

[a] *California State University, Sacramento, United States*
[b] *Southern Illinois University Edwardsville, United States*

ARTICLE INFO

Keywords:
Chief Marketing Officer
Chief Information Officer
Firm performance
Power
Managerial power
Executive power
Information technology

ABSTRACT

There is emerging evidence that the Chief Marketing Officer is likely to surpass the Chief Information Officer in IT spending. Hence, it is relevant and timely to understand the relative impact of the CMO and CIO on business value. This study uses the foundation of executive power and influence to examine this question and analyze the relative impact of powerful technology and marketing leaders on firm output. We find that the inclusion of a powerful technology leader is more predictive of a sustained increase in firm output than the inclusion of a powerful marketing leader over a one-year, five-year and seven-year period.

Introduction

"Marketing is from Mars: IT is from Venus," so proclaims the National Association of Electrical Distributors (NAED, 2014) in trying to understand how these two important C-suite roles are changing with the technological disruption wrought by cloud computing, social media, mobile computing, and analytics. Tomison (Avanade, 2016) asks whether the executive boardroom will have room for both the Chief Information officer (CIO) and the Chief Marketing Officer (CMO). Others (Krasnikov and Jayachandran, 2008) find that marketing delivers greater firm performance than the functions of Research and Development (R&D) or Operations. Such observations from practice and research coupled with the rapid deployment of radical new technologies raises the question of which executive, the CMO or the CIO, has greater effect on firm performance.

In the waning days of the dotcom boom, Information Technology (IT) executives at Amazon recognized an opportunity to leverage the company's rapidly growing infrastructure to support other companies. The company initiated development of an Application Program Interface (API) based technology infrastructure for internal development. This insightful initiative by Amazon's technology executives laid the groundwork for Amazon's subsequent services offering that became Amazon Web Services, the dominant cloud computing provider with over $10b in annual revenue (Miller, 2016). This example illustrates a case where a powerful and prescient technology leader recognized a potential shift in the marketplace, and undertook previously unplanned changes that positioned the company to take advantage of future opportunities. Such examples suggest that technology leaders can be uniquely placed to generate firm value over time.

Scholars have separately analyzed the effect of the CMO on firm performance and there is support for this thesis (Eric Boyd et al., 2010; Krasnikov and Jayachandran, 2008; Nath and Mahajan, 2011). There is also ample literature on the effect of IT investments on firm performance and business value but with mixed results in research regarding the CIO's impact on firm performance (Banker et al., 2011). The question of whether the CIO or CMO has greater impact on firm performance remains unanswered. Therefore, the present study is the first attempt to shed light on this question and analyze the relative impact of the CMO and CIO on firm

* Corresponding author.
E-mail addresses: joseph.taylor@csus.edu (J. Taylor), jvithay@siue.edu (J. Vithayathil).
[1] Author names are in alphabetical order and all authors contributed equally to this research article.

https://doi.org/10.1016/j.jsis.2018.04.001
Received 27 September 2017; Received in revised form 7 April 2018; Accepted 16 April 2018
0963-8687/

performance.

Why is this question of the impact of the CMO and CIO of importance today? The answer in a nutshell is: (i) The CIO and the CMO are the biggest spenders on corporate IT (Brinker and McLellan, 2014), (ii) There is mounting evidence that CMO spending on IT may surpass CIO spending on IT (Sareen, 2013; Sorofman, 2017), and (iii) Technology is changing faster than ever in the marketplace, and firms are increasingly challenged to adapt to new technologies such as mobile, cloud computing, big data, social media among others, to maintain market share and capitalize on new market opportunities.

A secondary motivation for this research study is to shed some light on the perennial feeling of inferiority or irrelevance felt by Information Systems (IS) scholars compared to time-honored disciplines such as Marketing, Accounting, Operations or Finance. These other areas of study do not routinely attempt to justify themselves whereas IS researchers seem to be perennially discussing their relevance and justification for the IS research discipline. One of the manifest obsessions within IS is an obsession with an artifact which seems to function like a security blanket. Whereas an artifact may have been relevant during the era of mainframes, today in the 21st century few would question the pervasiveness of IT in everything we do in society, business and in life. There is no doubt that IT has affected organizations, people and society and provides tremendous value. Prior research, and more importantly, practice has clearly and indelibly established the value of IT. We add to this research by analyzing the comparative value of the CIO and the CMO.

Technology innovation has long been considered a prominent source of disruptive innovation (Christensen, 2013). While technology disruptions present great challenge to organizations, they also present great opportunities. Technology advancement can be of benefit to firms, but internal firm power struggles and organization dynamics have been found to contribute to resistance (Markus, 1983). The role of power has been found to contribute to the success of organizations. Within leadership teams, one measure of power that researchers have identified is higher levels of relative compensation (Carpenter et al., 2004). Based on prior literature, our research employs a key determinant of power, compensation relative to other executives, to assess the impact that a powerful leader in the c-suite, such as a CIO or CMO has on measures of firm performance. The power of executives in a firm has been associated with the ability to drive strategic change (Hambrick and Finkelstein, 1987). This prior research leads us to the conceptual model of our empirical study illustrated in Fig. 1.

As illustrated in Fig. 1, our analysis considers relative executive compensation of the CIO and the CMO. When these two executives are highly compensated relative to their peers, prior literature informs that they wield executive power and influence. A second stream of literature shows that power and influence of executives affect firm outcomes such as firm performance. This stream of prior literature on the effect of executive provides our theoretical foundation is described in the section 'Theory and literature'.

To answer these research questions, this study examines how firms with powerful technology leaders can affect top line performance, or sales output. Technology adoption has been found to contribute to changes in power within the organization over time (Burkhardt and Brass, 1990). Therefore, it is conceivable that with increasing IT investments that the CIO may have an increasing effect on firm performance and potentially eclipse the effect of the CMO. As firms empower technology leaders or CIOs with representation among the top management teams, what is the impact on firm output, and how does that impact on output compare to other key functional leadership roles such as the CMO?

We analyze the relationship between the inclusion of a technology leader or CIO within the firm's highest compensated executives with firm output. Representation of technology specialists within the top management team can facilitate the execution of a firm's technology vision (Lim et al., 2012). Technical expertise can allow firms to better identify opportunities to transform technological change into growth opportunities. Traditionally the marketing function represented by the CMO has been seen as an engine that drives firm output. We challenge this assertion in this paper and demonstrate that firms with powerful technology leaders achieve greater firm output, sustained over time, than firms that do not. Furthermore, we find that powerful technology leaders such as the CIO predict future, sustained sales output increase with greater strength than powerful marketing leaders such as the CMO.

Theory and literature

Relevant literature for our analysis comprises of prior research from four areas: (1) The role of power in organizations and the relationships between compensation and power, (2) The role and impact of the CIO in firms, (3) The business value of IT investments, and (4) The role and impact of CMOs in firms. Following this literature, we argue that organizational power provides a relevant and compelling theoretical underpinning to explain our hypotheses and results.

The role of power enjoyed by a leader or manager has been discussed in trade literature as well as in academic literature, and we

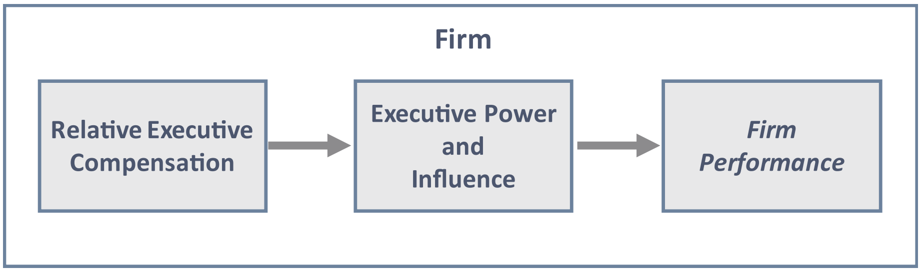

Fig. 1. Model of relative compensation, executive power, and firm outcomes.