Motivations to Adopt Green ICT: A Tale of Two Organizations

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ABSTRACT

Though green information and communication technology (ICT) is gradually becoming a buzzword, not much scholarly attention has delved into the motivations that can entice organizations to adopt it. To address this issue, this paper serves a three-fold purpose. First, it investigates the motivations for adopting green ICT from organizations’ perspectives. Second, it explores cases of two organizations (Hewlett-Packard and Microsoft Corporation) known for their green ICT strategies and unearths the extent to which such motivations are applicable to them. Third, through the two cases, the paper gives valuable insights to non-green organizations into the potential benefits of green ICT. The paper proposes a three-tier theoretical framework consisting of management, technological, marketing, financial and regulatory motivations, and acts as an eye-opener for non-green organizations by suggesting that it is their inability to identify these motivations that prevent them from adopting green ICT.

Keywords: Carbon Footprint, Case Study, Green Computing, Green Information and Communication Technology (ICT), Hewlett-Packard (HP), Microsoft, Motivations

INTRODUCTION

Information and communication technology (ICT) is an umbrella term associated with the use of computers and communication technologies, and involves systematic collection, storage, retrieval, processing and dissemination of information. Over the past decade, ICT has transformed the world by continuously delivering ingenious products and services. It finds widespread applications in e-governance, distance education, disaster management, agriculture, human resource management, and plays a pivotal role in the overall growth and development of the society (Bhatnagar, 2000). The steep increase in the use of ICT is not foreseeable to plateau in the near future.

The obvious blessings of ICT however, cannot refute the fact that it is a potential environmental pollutant. It contributes as heavily as 2-2.5 percent of the global carbon footprint (Gartner, 2007). ICT thus, represents a double-edged sword. On one hand, it has become such an integral component of the modern society
that it can never be discarded. On the other, its
use can be detrimental for the environment.
Hence, the only option is to renovate, remodel
and revive the existing ICT sector to ensure that
its impacts on the environment are minimized
as much as possible. This makes way for an
emerging trend, known as green ICT.

Green ICT, also known as green computing
or sustainable computing, is defined as:

*The study and practice of designing, manu-
facturing, using, and disposing of computers,
servers, and associated subsystems (monitors,
printers, storage devices, etc.) efficiently and
effectively with minimal or no impact on the

It refers to a set of computing strategies that
are eco-friendly and environmentally sustain-
able. It is not a one-time effort but is regarded as
a continuous process to adopt environmentally
conducive computational techniques (Jenkin,
Webster & McShane, 2011). Green ICT is
fast becoming a buzzword given its ability to
reduce the carbon footprint associated with
traditional ICT.

Although the notion of green ICT is
profitable for the environment, organizations
are often found reluctant to adopt it. This is
perhaps because green ICT efforts apparently
require huge investment of time, money and
resources, which cannot be undertaken over-
night (Jenkin, Webster & McShane, 2011;
Olson, 2008). Widespread adoption of green
ICT by organizations can occur only if its use
leads to the achievement of tangible beneficial
outcomes or avoidance of tangible adverse
consequences (Philipson, 2011). Yet not much
scholarly attention has delved into the factors
that can potentially motivate organizations to
adopt green ICT.

In order to address the issue, this paper
sheds light on green ICT from the perspective of
organizations, and serves a three-fold purpose.
First, it investigates the motivations for adopt-
ing green ICT from organizations’ perspectives.
Second, it explores cases of two organizations
(Hewlett-Packard and Microsoft Corporation)
known for their green ICT strategies and un-
earths the extent to which such motivations are
applicable to them. Third, through the cases,
the paper gives valuable insights to non-green
organizations into the potential benefits of
green ICT.

The remainder of the paper is organized
as follows. The following section presents the
literature, which subsequently culminates into a
three-tier theoretical framework that underpins
the motivations for organizations to adopt green
ICT. Then, the Methodology section explains
the procedures for data collection and analysis.
Next, the cases of the two organizations are
elaborated in light of the theoretical framework.
Finally, the paper discusses the implications
and concludes by highlighting the limitations
and future scope.

**LITERATURE REVIEW**

**Importance of Green ICT**

Though the ICT industry was initially viewed
as environmentally benign, the carbon footprint
caused by ICT equipments has been a subject
of intense interest since the first Energy Star
specification for personal computers was
released in the early 1990s (Johnson & Zoi,
1992). ICT represents 2-2.5 percent of the total
global carbon emissions, which is equivalent to
the global aviation industry (Gartner, 2007). In
previous decades, environmental considerations
of ICT were at best, after thoughts. However, as
the ICT sector gathers steam, they are becoming
essential forefront considerations (Bozman &
Prete, 2011). This has led to the emergence of
green ICT.

Green ICT aims to maximize the use of ICT
resources while reducing their cumulative car-
bon footprints (Murugesan, 2008; Potter, 2008).
It attempts to find the intersection between the
adoption of appropriate eco-friendly strategies
and the implementation of right business strate-
gies (Gupta, 2009). It involves looking at the
bigger picture - not only profit maximization for
the organization but also better environment for
mankind. Green ICT is not a single technique
Sustainable Water Provision: Challenges, Alternative Strategies And Sources In The Era Of Climate Change
www.igi-global.com/chapter/sustainable-water-provision/42404?camid=4v1a

The Beauty and the Beast?: A Tale of Democratic Crises and Globalization
www.igi-global.com/article/beauty-beast-tale-democratic-crises/77346?camid=4v1a