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The fight against digital piracy: An experiment

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ABSTRACT

With the increased reliance on the Internet, digital piracy is a hot topic that is receiving substantial interest. And while most studies concentrate on understanding piracy in developed countries, few studies have been done in developing countries. In order to fill in this gap, this study reports on an experiment to deter/prevent digital piracy behavior in an Arab and a Middle Eastern country. The study used an experiment where different treatments (effect of religion, law, and awareness) were applied to the samples. Results revealed that only the religion and awareness treatments contributed to a decline in digital piracy, and that awareness having the higher effect on the piracy intention. This study discusses the study results and implications for both research and practice.

1. Introduction

With high Internet speed connections, and an increased power of computing technologies, there has been an increasing trend toward digital piracy. This form of piracy goes beyond the classical and regular software piracy; where software piracy deals with illegally copying/downloading of software, digital piracy deals with a much broader concept. This paper defines digital piracy as "the illegal copying/downloading of digital material, such as software, music, videos, audio books, and other copyrighted material" (Al-Rafee, 2002). Examples of digital piracy include: downloading commercial software from illegal sites (usually called warez sites), using peer-to-peer technology to download the latest Hollywood movies, downloading a bestseller book in electronic format (either in audio or e-book format) from a newsgroup on the Internet's Usenet, or downloading your favorite artist's songs using torrent software.

Needless to say, losses due to digital piracy have been growing at an alarming rate. This growth is fueled by several factors such as: availability of untraceable peer-to-peer networks, availability of high storage media at low cost, an increased use of computers and digital devices connected to the Internet, and the spread of high-speed Internet connections at low cost. Such a trend enables users to download a newly released Hollywood movie in less than 15 min, less than the time that takes you to drive to your local cinema theater, and without incurring any cost. The Motion Picture Association of America (MPAA) (MPAA 2005) estimated worldwide losses of digital piracy about $18 billion in 2005, while the Recording Industry Association of America (RIAA) reported $12 billion yearly loss in the music industry. A recent study estimated losses of around $40 million per major Hollywood movie due to piracy (De Vany and Walls, 2007). And it is not just Hollywood, according to a recent estimate, Bollywood (India's Hollywood) has lost close to $4 billion in 2007, with an estimated 800,000 jobs lost

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due to piracy (Joshi, 2008). According to the Business Software Alliance (BSA), software piracy had the highest annual loss of $48 billion in 2007, which represented an increase of 20% compare to 2006 (BSA, 2008). The BSA estimates that around half of all PCs (about 1 billion computers) contain unlicensed software, with an overall piracy rate of 38% in 2007. And unfortunately, this seems like a problem on the rise (Hill, 2007). The USA had the lowest piracy rates (20%), with Armenia, Bangladesh, and Azerbaijan having the highest piracy rates (93%, 92%, and 92%, respectively). In the Middle East, the software piracy rate was a whopping 59% in 2008 (according to the BSA).

The global piracy study by the BSA (in 2007) highlighted some of the disadvantages of digital piracy (BSA, 2008):

> "Software piracy negatively affects much more than just the industry. It also puts a strain on technology companies' ability to invest in new jobs and new technologies; harms local resellers and services firms; lowers government tax revenues; and increases the risk of cyber crime and security problems. A recent IDC study conducted for BSA found that reducing software piracy by ten percentage points over four years could deliver billions in economic growth and hundreds of thousands of new jobs".

A lower digital piracy rate can lead to economic growth, save jobs, encourage and promote innovations and new products, and lower the price of digital material. While media companies have tried many approaches to combat piracy, these have mostly failed in reducing piracy (Taylor et al., 2009).

This study will examine the digital piracy within an Arab and a Middle Eastern country (in the Gulf area, where countries share common cultures). The study reports on several experiments to assess the effectiveness of three factors that might deter/prevent digital piracy behavior. These factors are as follows: (1) Religious factor: "whether a religious ruling/edict (fatwa) will help in deterring the digital piracy behavior", (2) Awareness factor: "whether awareness about the dangers of piracy deters the digital piracy behavior", and (3) the law/legal factor: "will new regulations/enforcement regarding piracy help in deterring the digital piracy behavior".

2. Theoretical background

2.1. The effect of culture

This study focuses on an Arabic country in the Gulf area, which is a moderate and a conservative Islamic (typical of the area). Within a society, many studies have examined the effect of culture on behavior within a society (Bodega, 2002). And while there are several cultural models, Hofstede (1980) is the most widely known and used. According to his model, four dimensions determine the cultural differences among countries/cultures (Hofstede, 2008):

(1) *Power distance:* refers to the extent of equality or inequality within a society. Where inequality also suggests that followers endorse the society's level of inequality as much as their leaders.
(2) *Individualism vs. collectivism:* refers to whether the society is based on individuals rather than groups.
(3) *Masculinity vs. femininity:* reflects masculine dominance over feminine influence within a society. It measures whether roles are distributed equally between genders.
(4) *Uncertainty avoidance:* refers to the society's tolerance of uncertainty, "It indicates to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations" (Hofstede, 2008).

In his landmark study about national culture, Hofstede (2008) provided scores and results for more than 70 countries. Regarding the gulf region, his results suggested a high score of power distance (indicating the existence of a caste system). It also indicates a low score for individualism vs. collectivism (indicating a collectivist culture, where societies are based on family and extended families), a high uncertainty avoidance score (indicating that people are used to laws and rules governing their lives; thus reducing uncertainty), and have a relatively high masculinity score which he attributed to Islam and not to the national culture (Hofstede, 2008).

Many past studies have asserted that culture plays a significant role in affecting behavior related to technology (Rouibah, 2008). Several studies found significant and positive relationships between the effects of different cultural variables on piracy behavior (Husted et al., 1996; Shore et al., 2001; Depken and Simmons, 2004; Proserpio et al., 2005). Since culture was implemented in term of several variable including, gender, religion, national or country level; regional and/or ethnic, social class level; and organizational level, this study aims to study the impact of culture through the effect of religion.

2.2. Behavioral research

Previous research has been undertaken to understand and predict human behavior in general. Several behavioral theories exist, and are well validated within the literature. The Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975) and the Theory of Planned Behavior (TPB) (Ajzen, 1991) are among the most well known behavioral theories within the academic literature. They have been used extensively to determine/understand human behavior in a variety of situations (Sheppard et al., 1988; Madden et al., 1992; Legris et al., 2003).