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AN EXPLORATORY STUDY OF SOFTWARE PIRACY IN JORDAN

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ABSTRACT

This paper documents an exploratory study of software piracy in the developing country of Jordan. Piracy levels in the developing world have consistently ranked higher than in the industrialized nations, and this study finds that Jordan is no exception. Almost a quarter of those surveyed appeared to not understand the legal issues involved in piracy behavior. However, a majority did believe that copying software illegally is unethical. The roles of the government, NGOs and private industry in educating the public were also studied. The respondents believed that all three groups have a responsibility to increase public awareness of piracy issues, but the success of such efforts was seen as limited. The paper finishes with some suggestions on combating piracy in Jordan, including the implementation of a unified marketing strategy to raise public awareness of the issue.

Keywords: Software Piracy, Intellectual Property Rights, Jordan

1. INTRODUCTION

Jordan is a small developing country in the Middle East, striving to find a place in the modern world. Its human resources are considered one of its greatest assets, and programs in information technology (IT) are growing in strength. The government's intent to develop a technology industry has begun to pay dividends. However, as with many other places in the developing world, software piracy has become an issue that must be dealt with. One recent study found that over 80% of those surveyed admitted to using illegally copied software (El-Sheikh et al, 2004), while the official Business Software Alliance (BSA) statistics indicate that 64% of all software in Jordan is pirated, representing a loss of US$ 15 million to the software industry (Business Software Alliance, 2005). These are troubling numbers, although not surprising. The average piracy rate for the Middle East and Africa as a whole is 58% (Business Software Alliance, 2005). Jordan's government has recognized the extent of the problem and is taking steps to address the issue.

To date, there has been very little research into the software piracy problem in Jordan, or any other Middle Eastern country. This paper documents an exploratory study of piracy in Jordan, focusing on descriptive statistics regarding the problem, and the attitude of software users to the ways in which piracy awareness is being addressed by the government, non-governmental organizations (NGOs) and the private sector. The results provide insight into the software piracy problem in the country, and can be used as a starting point for further efforts to reduce illegal intellectual property rights (IPR) infringement.

2. BACKGROUND

Jordan is a relatively small country of 5.5 million people, located in the Middle East. Currently, Jordan's developing IT industry employs approximately 10,000 people and generates US$ 167 million in annual revenue (Usaid.gov, 2004). In an effort to encourage foreign investment and promote growth in the fledgling software industry, Jordan's government has passed several intellectual property laws, in recent years. In 1999, Jordan's parliament amended the country's 1992 Copyright Law and passed various regulations to better protect intellectual property, and the National Library Department has been given governmental responsibility for enforcing these laws. Due in large part to efforts such as these, software piracy in Jordan has seen a steady decline since 1994, when rates reached 87%. However, Jordan's current piracy rate of 64% is still well above that of most industrialized countries (Business Software Alliance, 2005).

A number of NGOs and industry trade groups are also active in the effort to curb piracy in Jordan. The Jordanian Intellectual Property Association (JIPA), the Jordan Computer Society (JCS) and the Information Technology Association of Jordan (Intaj) have all sponsored anti-piracy campaigns. JIPA, for example, sponsored the first annual "Jordan IP Week" in Amman, in 2003, and the World Intellectual Property Organization (WIPO) Arab Regional Conference on Electronic Commerce and Intellectual Property was sponsored by Intaj. However, the most active organization is the BSA, which operates worldwide in an effort to stamp out piracy behavior on behalf of its member companies. With offices based in Nabeel, the BSA sponsors and participates in conferences, provides organizations with literature, and appoints "intellectual property ambassadors," who carry the responsibility of raising awareness.

Private industry in Jordan, and elsewhere, has been slow in recognizing the issue of software piracy as a major concern. While some companies do attempt to warn employees and clients of piracy issues, many do little in this area, and few have an individual or department responsible for IPR enforcement.

Culture is often cited as a factor in the difference in piracy rates between countries (e.g. Davison, 2000). While Western culture generally focuses on the "right of ownership," thus leading to legal protection of IPR, non-Western cultures often focus more on what benefits society as a whole. In the case of developing nations, which are often more "non-Western" than countries considered members of the developed world, organizations, including the government, may focus on spreading technology as broadly as possible, in order to improve productivity and, therefore, create a better society (Steidlmeier, 1993; Davison, 2000). The ethical nature of these decisions must be seen in the light of the culture in which the decisions are being made. The fact that piracy is more rampant in places such as China and Jordan does not necessarily imply that individuals in these countries are less ethical in nature than those in the United States or Western Europe. The ethics of the society are simply different and must be understood, when approaching the software piracy problem.

Which set of ethics should govern legislation and enforcement of property rights is still up for debate (e.g. Spinello, 2003). However, it is clear that the Westernized view of IPR protection and enforcement is becoming the world business standard, and is favored by such organizations as the WTO and the WIPO. In order to participate fully in the current global business environment, developing countries must address IPR issues. Jordan has clearly moved in this direction, at a governmental level.

The BSA has undertaken a two-pronged approach to reducing piracy behavior: educate the public and organizations as to the illegal and unethical nature of piracy, and work with governments, law enforcement agencies and international organizations in an effort to raise punishment and enforcement levels. Jordan has attempted to increase the legal fight against piracy, with several new laws and amendments taking effect, in the past few years.

This exploratory project studies the role of government, NGOs and the private sector in raising public awareness, while also gaining basic statistics on the piracy problem in Jordan.

3. METHOD

The study utilized a questionnaire developed in Arabic by three of the authors. Basic Likert scales were used to measure the respondents' views on the topics under investigation. Table 1 provides the items (translated into English) used in the questionnaire, as well as the results. The instrument also contained several questions on demographic factors (age, gender, etc.) and asked the respondents to self-identify their software piracy behavior. As this is an exploratory study with straightforward items and no hypotheses, the questionnaire did not undergo rigorous testing for statistical validity. However, questionnaires were provided to a small group of colleagues and students for comment, and minor modifications were made to improve the clarity of some questions.

The questionnaires were distributed to several available groups: adults taking graduate level evening classes at the Arab Academy for Banking and Financial Services (AABFS) in Amman, Jordan, and workers in a number of private and governmental institutions. Three advanced undergraduate students were also included. No incentives were given for completing the questionnaire, and all respondents were promised anonymity. Almost all of the respondents were employed. This sample was chosen as it provided an available group of current and future Jordanian business professionals with the ability, opportunity and knowledge to use computer technology. 110 questionnaires were distributed, with 100 useable surveys returned, yielding a useable response rate of 90.9%.

4. RESULTS

The demographic data were as follows: 77% of the respondents were male and 23% female, which is not a surprising result, given the makeup of the technology workforce, particularly in the Middle East. 32% of the respondents were less than 25 years old, 59% ranged from 25 to 40 years old, and 9% were over 40 years old. 88% of the respondents had at least a Bachelor's degree. 59% of the respondents had a degree in Computer Science, Information Technology, or some other IT related area, with a further 6% majoring in Engineering. 26% held degrees in business-related disciplines, while 11% had completed a law degree. 71% of the respondents were single.

When asked about their own software piracy behavior, 74% freely admitted to knowingly illegally copying software (79% of men, 57% of women). However, only 78% of

the respondents understood that piracy was illegal, implying that 22% of the respondents either did not understand the current state of legislation, or were unaware that laws even exist. Therefore, the actual number of individuals copying software illegally is probably higher, as some may be committing piracy unknowingly. Furthermore, 63% of the respondents stated that piracy is unethical. While most respondents agreed that piracy was both unethical and illegal (despite the fact that the majority still committed the act), 11% found piracy to be illegal, but ethical.

Several questions were asked to determine the views of the respondents towards the role of government, NGOs, and the private sector in the effort to combat piracy. 5-point Likert scales were utilized to measure the respondents' opinions (1=do not agree, 3=do not agree or disagree, 5=agree). Table 1 shows the means and standard deviations for the various questions asked.

Table 1: Survey Results

All questions used a 5-point Likert scale (1=Do not agree, 5=Agree)

Question	Mean	Std.Dev.
The government has a responsibility to conduct an awareness campaign through the media to combat software piracy	4.11	1.00
The government is doing a good job of using the media to raise public awareness regarding software piracy	2.81	1.05
Non-governmental organizations have a responsibility to conduct awareness campaigns using the media to combat software piracy	3.86	1.08
Non-governmental organizations are doing a good job of using the media to raise public awareness regarding software piracy	2.68	1.09
The private sector has a responsibility to conduct awareness campaigns using the media to combat software piracy	4.09	1.12
Private sector organizations are doing a good job of using the media to raise public awareness regarding software piracy	2.84	1.08
Using the Internet as a media channel is an effective way of raising awareness regarding software piracy issues	3.71	0.97
Advertising in magazines focusing on software is an effective way of reducing software piracy	3.77	0.89
Advertising in the popular press, television and radio is an effective way of reducing software piracy	3.80	1.11
Distributing brochures to raise people's awareness of the software piracy problem is an effective way of reducing software piracy	3.68	0.98
Presenting at conferences and seminars is an effective way of reducing software piracy	3.84	1.05
Keeping the message simple is an important aspect of preventing software piracy	3.83	1.04
People's awareness of the risks of software piracy is increasing	2.88	1.13
Currently, software piracy is decreasing	2.50	1.11

5. DISCUSSION

The results provide some interesting discussion points. Clearly, the software piracy problem in Jordan is large. While the BSA statistics show a piracy rate of 64%, this study finds that the numbers may be higher. The respondents were also negative, when asked whether or not piracy was decreasing (mean score of 2.50 in response to the statement "Currently, software piracy is decreasing", on a 5-point Likert scale, where 1=disagree, 3=neither agree or disagree, 5=agree), which disagrees with the BSA's assessment that piracy is on the downturn.

Perhaps more worrying is the fact that 22% indicated that they did not understand (or had no knowledge of) the laws regarding piracy. As the sample consisted mostly of educated professionals who work in industry, this implies that concerned organizations have work to do, if they wish to make software users aware of the problem. Jordan has undertaken great efforts in the recent past to increase awareness of IPR, including an annual IP Week. The National Library, the King Abdullah Center for Intellectual Property, and JIPA have all participated in awareness campaigns, in 2005. However, more work needs to be done.

On the positive side, a large percentage (63%) stated that piracy is unethical, demonstrating that many people understand the inherent worth of IPR. This is a useful finding to those fighting piracy, as it indicates that many of those committing piracy actually believe the act to be wrong (they may find it wrong on one of two levels, or both: the act of copying intellectual property is inherently unethical, or breaking the law is unethical – in either case, the fact that the individual finds piracy to be unethical is useful to those trying to reduce piracy). Only 11% stated that piracy was illegal but ethical.

One interesting result was the difference between males and females, in the survey responses. While 79% of men admitted to committing piracy, only 57% of women admitted to the act. This significant difference echoes previous research in the developed world, where it has been found that men are more likely to copy software illegally than women (e.g. Sims et al, 1996; Peace, 1997). Even across cultures, it appears that women do not commit piracy as often as men. It can be speculated that cultural traditions in Arabic societies create a climate where women are more likely than men to follow the official rules, but it simply appears that women are less likely to pirate than men, no matter what the culture. The difference between men and women in the area of ethics is not limited to the issue of piracy. Women often perceive ethical issues differently than men (Gilligan, 1989).

The rest of the survey questions focused on government, NGOs and private organizations, and their roles in increasing awareness of the software piracy problem. Interestingly, the respondents indicated a strong belief that all three entities have a responsibility to conduct awareness campaigns in the area of piracy (all approximately 4.00 on a Likert scale of 1 to 5). There was also support for using advertising in industry-specific literature, the popular press, television, radio and the Internet to spread the word, along with presentations at industry conferences. Clearly, the respondents believed that informing the public is a joint responsibility of both industry-specific organizations and the government, and that both industry-specific and popular media outlets can be used effectively to spread the word. However, there was little indication of support for the actions that these organizations have undertaken, to date. When asked whether or not the three groups had done a good job in using the media to raise public awareness regarding piracy, using a 5-point Likert scale (1=disagree, 3=neither agree or disagree, 5= agree), the mean scores were between 2.68 and 2.84. These responses do not provide a great deal of support for the groups' actions in this area.

Further indicating a lack of success in the efforts of organizations to educate the public is the response to the statement "People's awareness of the risks of software piracy is increasing". On a Likert scale of 1 to 5 (1=disagree, 3=neither agree or disagree, 5=agree), the mean response was a slightly negative 2.88. The respondents do not believe that awareness is being raised.

An integral aspect of any strategy aimed at combating piracy is an understanding of the cultural aspects of the population under study. As previously stated, Western culture has a clear tradition of property rights. However, Eastern culture focuses much more on the overall welfare of society. The world business climate is dominated by Western business traditions and, therefore, IPR protection has become a staple of most international treaties and legislation (e.g. the WTO's Trade-Related Aspects of Intellectual Property Rights Agreement). This has caused obvious problems in countries such as China, where the cultural tradition has not historically included the right of an individual or organization to prohibit the copying of intellectual property. However, in Jordan, a different culture exists. Business in Jordan has a well-established tradition of negotiation, and is more similar to Western business practices than Eastern cultures. Among Middle Eastern nations, Jordan is perceived as being more pro-Western than many of its neighbors. Jordan also has a history, albeit relatively short, of IP protection, with the first Trademark Law being adopted in 1952. Finally, Jordan has a well-established and powerful legal system, and has implemented extensive IPR legislation, in the past ten years. Organizations such as the Arab Society for Intellectual Property (ASIP – headquartered in Amman), JIPA and the BSA have been active in the fight against piracy and have received government support. Consequently, Jordan is much better placed to address the piracy problem than other developing nations. In Jordan's favor is the fact that a majority of respondents to this survey state that piracy is unethical, with only 11% stating that piracy is illegal but ethical. This shows an underlying understanding of, and even support for, the Western ethical IPR tradition, and the reduction in piracy rates since the introduction of legislation and enforcement proves that progress can be made.

6. IMPLICATIONS

This raises the question of what can be done to reduce the problem of piracy in countries such as Jordan. As stated above, part of the BSA's strategy has been to increase public awareness as to the nature of the problem, and various Jordanian organizations have undertaken awareness campaigns, since IPR legislation was passed in the 1990s. This study gives support for this course of action. A significant percentage (22%) of the respondents were unaware of the laws regarding software piracy. These people need to be educated as to the laws surrounding IPR – piracy is clearly illegal in Jordan, and people need to be made aware of that fact. Simply educating these individuals could lead to a decrease in illegal copying. However, greater comfort can be found in the result that the majority of the respondents (63%) believe that piracy is unethical; these individuals agree with the concept that piracy is wrong, placing them in line with more Western cultural traditions. Making these people more aware of the negative consequences of piracy, focusing on the unethical nature of the act (therefore increasing the "guilt" factor), could be useful. Those respondents that did not find piracy to be unethical need to be better educated on the issue, in an effort to change their views.

The respondents also believe that all groups (government, NGOs and the private sector) are responsible for raising awareness, and that both the Internet and popular public media can be effective outlets for distributing information. However, they do not believe that these groups have been doing a good job utilizing these outlets. Organizations wishing to reduce piracy would logically include members of all three groups: government has passed

laws attempting to reduce piracy, non-profit organizations have established anti-piracy campaigns, and private industry has a legal and moral duty to reduce piracy, based on the laws of the land. Therefore, the results of this study indicate that all three groups need to improve their strategies for raising awareness. A unified marketing campaign would be an appropriate course of action. Piracy can be reduced through the use of media to make software users aware of the unethical and illegal nature of the act, and the potential damage that piracy creates. Focusing on the benefits of strictly enforced anti-piracy legislation may also be useful. For example, a reduction in piracy may lead to Western companies being more willing to invest in the Jordanian economy, thus benefiting Jordanian society as a whole (and counteracting the potential argument that distributing software, albeit illegally, is good for society).

One aspect that this study does not address, but that has been proposed as a factor in the piracy problem, is the relative cost of software. Software with one global price is considerably more "expensive" in developing nations than in more developed countries, when compared as a percentage of per capita GDP. This disparity may be a root cause of piracy (e.g. Peace et al, 2003, found that cost is a significant factor in the decision to pirate). Gopal & Sanders (2000) have suggested graduated pricing strategies as a potential method for further reducing piracy behavior in the developing world. If the cost of software is too far out of line with its perceived value or the ability of the consumer to purchase the software, piracy will always be a problem. This is an area worthy of further investigation, when analyzing piracy in the developing world.

7. LIMITATIONS

There are several limitations to this study. First of all, the surveys were conducted in Arabic, and then translated into English. While great care was taken to ensure an exact translation, mistakes can always occur, and it is often difficult to ensure that the true meaning of the phrases used are provided. Secondly, those surveyed were part of a convenience sample, making the generalizability of the results to the overall population difficult to ascertain. However, given that this is an exploratory study aimed at obtaining basic introductory information, it is not believed that these limitations negatively impact the results garnered. Finally, when asking respondents to admit to an illegal activity, there is always a possibility of response bias. However, the facts that such a high number of individuals freely admitted to illegally copying software, and that anonymity was promised, indicate that any bias was very minimal.

8. CONCLUSION

As with many developing countries, software piracy in Jordan is a serious issue that needs to be addressed. This study confirms the extent of the problem in Jordan, and supports the findings of the BSA (Business Software Alliance, 2005). However, it also provides hope for the future, as a majority of respondents clearly indicated that piracy is unethical, while a significant minority were unaware of current piracy laws and regulations. Therefore, increasing awareness (a cornerstone of the BSA's strategy, and a current focus of several Jordanian organizations) is suggested as a key element in the fight to reduce piracy behavior. The study also raises concerns regarding past public awareness campaigns of the government, NGOs, and industry groups. While the respondents clearly see these groups as having the responsibility of raising awareness of the issue, none are given high marks for success.

Consequently, a unified marketing strategy is recommended for these organizations, in an effort to raise public awareness of the illegal and unethical nature of IPR infringement.

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