

REVIEW ARTICLE

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THE EFFECT OF JORDANIAN LAWS IN REDUCING SOFTWARE PIRACY

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Abstract: The large and rapid development in the fields of technology and computer and its frequent use in various fields in the last decade, make everyone, even the ordinary people and illiterates, computer users. But, unfortunately, some people abuse this technology and consequently, damage the computers and hurt the people. We all observed many cases such as breaking through and damaging the internet sites, breaking through the banks and stealing the credit cards and much more. Such violations are called software piracy, a term derived from sea pirates. As a preventive measure, some Arab countries, including Jordan, legislated regulations and laws in order to prevent those who attempt to tamper with the security of data and computers' software. This research aims at studying the effect of legislations and laws in reducing piracy. We have provided in this study the implementations of laws and legislations in Jordan and some Arab countries. We have also consulted and asked the specialists in the public security to provide us with some statistics, which played a vital role in providing us with good results about the effect of enforcing the laws and legislations in Jordan.

Key words: Legislations, Laws, Intellectual property, Penalties, Software piracy.

1. Introduction

It goes without saying that fraud and theft can be carried out by anyone. That is to say, to do this you don't need to have qualifications or experience. But computer's crimes or software crimes are different in the sense that they need skills and hands on experience in order to break through the secret code to change the data, break through the network sites, imitate programs, software piracy or transfer money from the accounts by using the computer illegally in the networks of commercial banks and government [1, 2]. Thus, combating such crimes became one of the most important issues that is heading the agendas of seminars and conferences in the whole world. However, it is worth noting that these international tendencies, particularly from the developed countries are in its early stages in this fresh field as they are seeking to protect the information system. Can reduce software piracy requires a fundamental shift in public attitudes toward software and intellectual property. Public education is crucial; therefore, to increase awareness of the importance of software asset management and respect for the creative works through software license compliance. Experience has shown that awareness campaigns, public and private sectors on piracy and intellectual property value can be highly effective

2. Objectives of the study

The study aims at:

1. Studying and reviewing the laws and legislations enforced by the Jordanian government on software piracy processes.

2. Studying the relationship between law enforcement and copyright of the software producing companies.
3. Studying the effect of penalties in reducing the software piracy.
4. Studying the effect of law enforcement in protecting the companies producing software from gross losses that can lead to the closure of these companies.

3. Research questions

In order to fulfill the above mentioned objectives, the study attempts to answer the following questions:

1. Are the yearly losses of the companies due to the absence of laws and penalties that can prevent the software piracy?
2. If the laws were legislated and fully implemented, would they be able to protect the rights of property of creative people and reduce the software piracy?
3. Is there an effect of law enforcement of the intellectual property on the economic situation of the society and the country?
4. Is there an effect on software piracy if the country is concerned with the rights of intellectual property and is keen to enforce the law and increase the awareness among people about this issue?

4. Plan of the study

1. Collecting data about the Jordanian laws and legislations in the field of piracy.
2. Choosing the questions to be used in the questionnaire after consulting the specialists in this field.

3. Making a questionnaire and distributing it to the sample of the study.
4. Analyzing the data and drawing conclusions.

5. Review of related literature

Many software users often use copied programs and exchange them between each other without knowing that this process is unauthorized and prohibited by the laws and they may be punished by the law [6]. Other users know very well that it is a piracy, but the problem is that they do not realize its seriousness and it is considered as a crime and a violation of the rights of other people [2, 3].

Studies dealing with the piracy issue in order to know its causes and methods to overcome them have focused on the importance of the individual factor such as gender, age...etc. Some studies dealt with the ethics of making a decision and its impact on the piracy issue, while other studies have focused on the social factor, considering it as an important one in the piracy issue [16, 17].

Some studies have considered the economic environment of individuals and groups an important factor in using software. That is to say that the environment of good economic situation tends to use original software, whereas the environment of bad economic situation (people with low income) tends to use counterfeit software.

Some studies recommended the Association of Software Commercial Producers (ASCP) to combat the software piracy using three axes: legislation, education and law enforcement [7]. A study conducted in Jordan recommended the establishment of a governmental department to reduce the piracy and increase awareness among people about the rights of intellectual property [12]. Yet they are a few studies conducted in this field. So, the study stems its significance from being a pioneering study in this field because it addresses the impact of legislation on piracy which can lead to increase the productivity of software companies and affect positively the national economy.

6. Types of software piracy

There are five main types of software piracy:

1. End User Piracy

This occurs when an individual reproduces copies of software without authorization. These include:

1. Using one licensed copy to install a program on multiple computers.
2. Copying discs for installation or distribution.
3. Taking advantage of upgrade offers without having a legal copy of the version to be upgraded.
4. Acquiring academic or other restricted or non-retail software without a proper license.
5. Swapping discs in or outside the workplace.

2. Client-Server Overuse

This type of piracy occurs when too many users on a network are using a central copy of a program at the same time. If you have a local-area network and install programs on the server for several people to use, you have to be sure your license entitles you to do so. If you have more users than allowed by the license, that's "overuse".

3. Internet Piracy

This occurs when software is downloaded from the Internet. The same purchasing rules apply to on-line software purchases as for those bought in compact disc format. Common Internet piracy techniques are:

1. Websites that make software available for free download or in exchange for others.
2. Peer-to-peer networks that enable unauthorized transfer of copyrighted programs.

7. The importance of laws

The copyright protection law NO. (22) of 1992.

Author copyright protection law.

Issued by King Hussein Bin Talal, the King of the Hashemite Kingdom of Jordan.

1. Works created in literature, art and science, whatever the nature, or importance of those works, or the purpose for which they were produced, shall enjoy protection in pursuance to this law.
2. The said protection shall include the works expressed through writing, sound, drawing, photography or movement such as books, booklets, other written material and computer programs.
3. Protection shall include the title of the work unless the title is generic used to describe the subject of the work.
4. If a person creates a work for the account of another the copyrights shall belong to the author of the work unless agreed otherwise in writing.
5. The author shall have the exclusive right to have his work attributed to him and his name cited on all produced reproductions whenever the work is made available to the public, unless the work is cited incidentally during the news broadcast of current events. The author shall have the right to decide the publication of his work and determine the manner and date thereof. The author shall also have the right to affect any alteration on his work whether by modification, editing, omission or addition. He shall have the right to withdraw his work from circulation should there be serious and legitimate reasons to do so. In such a case the author shall be liable to justly compensate the person to whom the monetary rights have passed. The author shall have the right to exploit his work in whatever manner he chooses. Others shall not be entitled to exercise any of the rights stipulated hereunder without the written authorization of the author or his successors. This includes commercial leasing, reproducing it through sale, conveying the work to the public by reciting and exhibiting.
6. Public libraries, non-commercial documentation centers, educational academies and scientific and cultural institutions may copy any work by photography or by other means, without the author's consent provided that the photocopying and the number of copies is limited by the need of these institutes and that same does not harm the copyrights of the author and does not conflict with the normal exploitation of the work.
7. The protection period for the rights of performers after death is fifteen years for software programs.
8. After the lapse of the protection period stipulated in this law at any work, or when there are no heirs of the author or any successor to same before the lapse of the protection period,

the work shall revert to public domain so that any person may print, published or translate same if it were printed, published or translated before that.

9. A penalty of imprisonment for a period not less than three months and a fine not less than five hundred Dinars and no more one thousand Dinars, or one of those two penalties shall be applied to:
 - A. Exploiting financially the publication of the author without his prior authorization or his successor.
 - B. Publishing the letters of the author without his prior authorization or his successor should such publication harm the recipient.
 - C. Any recipient who offered for sale, circulation or rental counterfeited work or reproductions thereof, announced it to the public in any manner or used it to realize any material profit or entered it into the kingdom or took it out of the kingdom while knowing same was counterfeited or if same had adequate reason or evidence to know same was counterfeited.
10. In the event of repetition of any of the crimes stipulated in paragraph (A) of this article, the person who committed same shall be sentenced with the maximum term of imprisonment. The court may, in this case, rule on the closure of the institute which committed the crime for a period that does not exceed one year or suspend its license for a specific period or permanently.
11. The provisions of this law shall be applied to the published and unpublished works of Jordanian and foreign authors inside the kingdom and the published and unpublished works of Jordanian authors outside Jordan, with taking into consideration the provisions of international agreements related to the protection of copyrights and the reciprocity principle.

7.1. Penalties

Jordanian law prohibits production of software without permission. If caught with pirated software, you or your company may be prosecuted under provisions of copyright laws. The penalties include:

1. Fine of up to three thousand Dinars or more.
2. A prison sentence of three months extending up to three years.
3. For repetition of the offence, the offender will be liable to a maximum fine and maximum term of imprisonment as well as closure of the establishment for a period of time or permanently. The court will announce the punishment against the violators in the daily newspapers.

8. Description of the sample and population of the study

8.1 Population of the study

The population of the study is all computer users, but we attempted to focus on the people with qualifications (Bachelor, Master and PhD).

8.2. Sample of the study

Questionnaires were distributed randomly on computer users in work, home, or for the purposes of scientific research and study in the cities of Amman, Zarqa, Irbed and Mafraq. The sample included people who work in private and

government sectors. The questionnaire was distributed on a random sample that consisted of 300 individuals (male and female) and filled by the sample correctly.

8.3. Distribution of the questions in the questionnaire

- 1-8: General information questions include gender, scientific degree, age, marital status, monthly income and the nature of work.
- 9-18: Questions to measure the first hypothesis in order to know if there is a statistically significant relationship between the application of laws and legislations in the processes of software piracy and the increase in the production of software in companies.
- 19-25: Questions to measure the second hypothesis in order to know if there is a statistically significant relationship between full compliance with the penalties on piracy without any exception and the actual reduction of piracy.

The following scale was used in the questionnaire: Agree, strongly agree, do not agree, strongly disagree and neutral or I do not know.

8.4. Testing the Hypotheses

8.4.1. The first hypothesis

Ho: There is no relationship between the application of laws, regulations and legislations of piracy and the protection of the rights of property of companies producing software.

Ha: There is a relationship between the application of laws, regulations and legislations of piracy and the protection of the rights of property of companies producing software.

8.4.1.1. Responses of individuals according to the first hypothesis

1. The study has shown that 3% of the sample strongly agree that the application of laws reduce the software piracy, 33% agree and 4% disagree. Therefore, according to the arithmetic average, the majority strongly agree.
2. The study has shown that 54% of the sample strongly agrees that the legislations reduce the piracy processes, 51% agree, 21% neutral, 13% disagree. Therefore, according to the arithmetic average, the majority agree.
3. The study has shown that 29% strongly agree that the rights of property reduce the piracy, 63% agree, 10% neutral, 5% disagree. Therefore, according to the arithmetic average, the majority agree.
4. The study has shown that 61% strongly agree that the presence of international institutions enforcing the law of intellectual property can reduce the piracy, 55% agree, 9% neutral. Therefore, according to the arithmetic average, the majority agree.
5. The study has shown that 67% agree that the mass media has a significant impact in preventing and reducing the piracy, 33% agree. There is no neutral or opposition to this view. Therefore, according to the arithmetic average, the majority strongly agree.
6. The study has shown that 14% strongly agree that the copyright laws encourages companies to continue

working, 76% agree, 10% neutral, there is no opposition. Therefore, according to the arithmetic average, the majority agree.

8.4.1.2. One – Way ANOVA to test the first hypothesis

It is evident that the arithmetic average of the views of the sample about the effectiveness of applying the laws and legislations of piracy in protecting the rights of companies producing software products was equal 4.15 with a standard deviation of 0.45. Since the value of calculated t equals 16.29, which is higher than its tabulated value (1.6849), and in 95% confidence interval, we reject the null hypothesis (Ho), and accept the alternative hypothesis (Ha) which states that there is a relationship between the application of laws, regulations and legislations of piracy and the protection of the rights of property of companies producing software. We used one sample t test to compare means which is equal 3.

It is noticeable that the sample believes that applying the laws and legislations (Mean 4.15, with a standard deviation 0.45) is more important than the presence of laws and legislations (Mean 3.475, with a standard deviation 0.7841). Thus, having the laws without applying them is useless. And this was confirmed by the Association of Commercial Software Producers that the laws exist but they are dead letters [7].

8.4.2. The second hypothesis

Ho: There is no relationship between the application of laws and legislations of piracy and the increase in the production of software companies.

Ha: There is a relationship between the application of laws and legislations of piracy and the increase in the production of software companies.

8.4.2.1. Responses of individuals according to the second hypothesis

1. The study has shown that 40% of the sample of the study strongly agrees that the application of laws and legislations of piracy encourages companies to produce programs, 43% agree, 15% neutral, 2% disagree. Therefore, according to the arithmetic average, the majority agree.
2. The study has shown that 33.5% agree strongly that the increased piracy reduces the production of programs, 29% agree, 14% neutral, 23% disagree. Therefore, according to the arithmetic average, the majority agree.
3. The study has shown that 33.5% strongly agree that the piracy has a negative impact on the process of software production, 43% agree, 14% neutral, 9.5% disagree. Therefore, according to the arithmetic average, the majority agree.
4. The study has shown that 11% strongly agree that the piracy processes affect negatively on software production, 55% agree, 15% neutral, 19% disagree. Therefore, according to the arithmetic average, the majority agree.
5. The study has shown that 7% strongly agree that the piracy phenomenon on software minimizes the credibility of the companies producing software, 53% agree, 32% neutral, 8% disagree. Therefore, according to the arithmetic average, the majority agree.

6. The study has shown that 8% strongly agree that the security codes reduce the piracy phenomenon, 57% agree, 30% neutral, 5% disagree. Therefore, according to the arithmetic average, the majority agree.

9. Statistical methods used in the study

1. Frequencies and means for the standard deviations to describe the sample and the study variables.
2. One – Way ANOVA to test the main hypotheses.
3. Independent sample t-Test to test if there are statistical significant differences in the variables due to gender, age, marital status and the extent of using the device.
4. Analysis of variance (f-Test) to test if there are statistical significant differences due to the level of education and the nature of work.

10. Examples of companies' losses because of piracy and the effect of applying the laws in reducing the losses

10.1 Jordan

The losses of software companies as a result of the sale of counterfeit programs were estimated more than 35 million dollars in 2002, and 22 million dollars in 2008 [17]. Enforcing the laws of intellectual property reduces the rate of software piracy to 58% last year, noting that it was 60% in 2007, 61% in 2006, 63% in 2005, 80% in 1998 and 75% in 1999. On the other hand, according to the report of the Federation of BSA (Professional Computer Associates) on software piracy worldwide, the piracy rate declined in Jordan over three years (2007-2010) by 3 percent to 57 percent to be this percentage in Jordan for the first time less than the regional average of 58

10.2 Arab countries

As for the Arab countries, UAE is in the first rank in combating piracy. A study conducted by the ASCP revealed that the percent of piracy decreased in the UAE, while some Arab countries witnessed a notable improvement in combating piracy: Lebanon from 88% to 83%, Bahrain from 84% to 80%, Kuwait from 81% to 80%, Oman from 88% to 78%, whereas there was a slight rise in Qatar from 80% to 81%.

11. Conclusion and recommendations

11.1. Conclusion

The study has shown the following findings:

1. There is a statistically significant relationship between the application of laws and legislation on piracy and the protection of property rights for the producing companies.
2. There is a statistically significant relationship between the full compliance with the penalties on piracy on the violators without any exception and the actual reduction of piracy.
3. There is a statistically significant relationship between the application of laws and legislation on software piracy and the increase in the production of software in companies.

11.2. Recommendations

- Creating specialized administrative and police units to enforce the law and make campaigns.
- Creating effective judicial practices to ensure the application of civil and criminal laws effectively.

- Stimulating the local companies to produce a high quality programs.
- Stimulating the companies to produce software with good prices and suitable for the Jordanian.
- Supporting the local companies to produce software able to compete the international companies.
- Creating institutions specialized in increasing awareness among people about the bad effects of piracy on community.
- Giving the media enough space to pay a role in educating people.
- Creating specialized units to observe the extent of applying laws and legislations of copyright and distribution.

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