

Examining some Factors Responsible for the use of Pirated Software on Computing Devices and the Possible Ways to Reducing it

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Abstract: This research work was aimed at investigating some factors responsible for the use of pirated software on computing devices and the possible ways to reducing the use. The research work adopted qualitative research method (descriptive and explanatory methods), using secondary data such as library and internet sources, including published research works in related research areas. The results show that some of the factors responsible for the use of pirated software in some parts of the world are: availability of pirated software, ease of installation, high cost of licensed software, lack of adequate enforcement of the copyright law, unavailability of the genuine version some software in some countries or locations, etc. It was also found out from the results that some possible ways to stopping or reducing the use of pirated software in the society are restricting the availability of free download software, making the software very affordable to users, applying legal approach, collaboration between software companies and government agencies, software should be easily available and accessible irrespective of location or country, etc. It was concluded from the results that there are several factors responsible for the use of pirated software on the computers or computing devices, but there are some possible solutions to reducing the use of it. It was recommended that software companies should make the price of software very affordable to the users in the society irrespective of the financial strength of the users or prospective users. It was also recommended that a more comprehensive work on this which will involve public inputs like the use of questionnaire or interview be carried out in future.

Keywords: Computer, Genuine, Piracy, Software

I. INTRODUCTION

A software is defined as a set of instructions or programmes installed on a computer, and used for the operation of the computer as well as to carry out various tasks. As a result of possible cyber-attack on computers or computing devices, there is a greater need for cyber security since cyber-attack can occur due to the use of particular software, especially those that were not legally obtained or installed (Ayegba, *et al.*, 2024). However, cyberattacks are more prevalent in developed countries as opposed to developing ones. But even at that, developing countries also face cyber-attacks because the world has become a global village and everything is interconnected through the internet (Mohamed, 2020). The term, Cybersecurity is defined as the protection of internet-connected systems, including hardware, software, and data from cyberattacks (Adamu *et al.*, 2022). Cyber security is very important in the cyber space because it ensures the protection and safety of hardware, software and other information system components of a computer (Deibert and Rohozinski, 2010). Software piracy is very common in some parts of the world

today. Software piracy is an unauthorized reproduction of copyrighted software. The unauthorized copying or duplication of software can be done for different purposes such as personal use, business use and even selling copies of the pirated software. Though pirating copyrighted software is illegal, there are still millions of computer users pirating copyrighted software in the world (Ishwor, 2015). Also, as quoted by Ishwor, (2015) from the software use and the law of May 2004, the rates of software piracy have been increased rapidly with the growing use of computers and this activity not only affects the economy of software companies but also affects the customers who actually purchase their products as intended. According to Norizan, *et al.*, (2015), software piracy is no longer regarded as trifling issue as it has become a global matter that has been studied or discussed by many researchers around the globe. Moreso, several important bodies or organisations such as Business Software Alliance (BSA) has continuously reported the related topics covering the use, installation, total lost among software house companies etc. globally.

But irrespective of the number of people involved in the use of pirated software or even aiding software piracy across the world, there are several dangers or risks associated with the use of the pirated software. Some of these dangers that come with the use of pirated software are virus attack, document loss, legal action against the users, poor efficiency, unavailability of software update, limited capacity and capability, etc. (Ayegba, *et al.*, 2024). As a results of these several dangers, there was a need to investigate some of the reasons or factors behind the use of pirated software, and as well proffering some possible solutions. This is one of the reasons for this research work as it will go a long way to reducing drawbacks encountered when working with computing devices, and increase software companies desires to continue to provide new and updated software to solving emerging problems in the society.

II. METHODOLOGY

2.1: Method: This research work makes use of descriptive and explanatory types of qualitative research method. The descriptive method of qualitative research approach which is directed toward “what”, or answering of questions like what is this or what are the reasons as seen in this work. The explanatory research method tells the relationship between events, things, or groups. Explanatory research asks about why a particular thing has happened or is happening.

2.2: Data: The data or material used for the research work were secondary data. These were materials from the library, internet and others.

III. DISCUSSION AND ANALYSIS

3.1: Some Factors Responsible For The Use Of Pirated Software On Computing Devices are:

3.1.1. Availability of pirated software: Pirated software are available in many places. Pirated software can be downloaded for free from the internet in some countries. They are also sold by vendors in CDs in duplicated forms. Some of these vendors even sell them in open markets as well as on the street. In some cases, one can even collect from a friend or colleague in office and have it installed on the computer immediately. This is one of the major factors responsible for the use of pirated software.

3.1.2. Easy to install: Pirated software may be easier to install and use than legitimate copies without asking for many details during installation. It doesn't waste time. It is just a matter of inserting the CD or flash drive in the computer and click "install"... "next, next,... and "finish". This makes many pirated software to be very easy to install compared to the licensed one that will require various details of the user, and as well involving many stages before the installation is concluded.

3.1.3. Inadequate knowledge on the consequences of using pirated software: Though, many people use pirated software probably because of its readily availability, they may not be aware of some of the consequences associated with it. According to Ayegbaet *al.*(2024), some dangers associated with the use of pirated software on computers are legal action against the user, loss of documents, security vulnerabilities, lack of software update, inefficiency, ... One can even be charged to court for making use of a pirated software in some places because it is an illegal acquisition and use of someone's copyrighted property. There is a copyright law in many countries including Nigeria. Apart from the legal implication, there are some features that pirated software does not have, hence it cannot be used to do certain works. This is a big setback especially in the industry or office where urgent or complete results are needed.

3.1.4. High cost of licensed software: Pirated software is mostly cheaper to buy while some are available for free download on the internet. The cost of many licensed or legitimate software is high. In addition to the high cost, the number of users is limited. It can be for single user or between one and five users only. And, despite this limited number of users, and the higher cost, it has the number of years that it can't be used again. In other words, it has an expiry date. Some can be one year; some can be two or three years. And it has to be renewed or it can't be used to carry out any work again. Though the licensed ones have many advantages, the high cost involved before getting the whereas the pirated software or version can be gotten for free or at a far cheaper price makes some people to prefer having the pirated version on their computer or computing devices. According to David *et al.*, (2020), software is often considered unaffordable for most people in developing countries and even certain social categories of developed countries. These people generally believe that the only alternative is hacking software or pirating the software.

3.1.5. Non-recognition of the importance of licensed software: To some people, provided a software can do their works for them, they are not bothered about other features or how the software is gotten. All they want is to get their own work done. It is seen as a waste of money to pay high amount of money to buy a licensed software that one can get for free from a friend or on the internet. It is seen by some as a waste of resources.

3.1.6. Lack of adequate enforcement of the copyright law: If the people acquiring and making use of other people's copyrighted property or material are not punished or told of the legal implication, others won't stop doing the same. It is true that some people may not know of the legal consequences of using the pirated software, but when one or more persons are made to pay a fine for property theft, the news will go round. It will deter others from doing so, and even if some will even do, it will be at a minimum level compared to what is obtainable today in some parts of the world. The software industry could have a taskforce who will occasionally monitor software vendors' activities or visit software shops to inspect what they have in stock.

3.1.7. Unavailability of the genuine version of some software: Some books, though very important, are not allowed to be sold or taken to some parts of the world. On it, it will be written "Not to be sold outside ... name of the country". This same thing is applicable to some software. A software may be needed for a particular work in Nigeria, but the policy or the regulation guiding the operation of that software company does not allow it to make the software accessible to the people in Nigeria or some other countries. If some pirates got to know of this development, that is; knowing that people in a particular country need it but not accessible to them, they may find one illegal way or the other to make it available even though they are selling it to the people at a very low price. In addition, if the pirated version is on the internet, and people who are looking for genuine or legitimate one could not get it, they will resort to using the pirated one even if it cannot perform the whole functions intended. This is, irrespective of whether the user knows the consequences or not since he or she must make use of the software to carry out certain compulsory task in the office or workplace.

3.1.8. Financial constraints of the intending user: Sometimes, one may have a particular project and the only way to solve the problem faster is by using a particular software. But this software may be expensive, and the person intending to use the software like a student may not have such amount. He or she would have to look for a way to get a pirated version even if he or she doesn't want to do that in the first place. Apart from students, some civil servants or professional staff members may not be financially buoyant but need some software to carry out their works. In fact, the salary of some may not even be able to buy just one licensed software let alone two or more that may be needed. Since such a person must work, and needs some software to work, irrespective of how he or she feels, he or she may resort to the use of pirated software.

3.2 What are the possible solutions to stopping the use of pirated software used on computers or computing devices?

To stop the use of pirated software, here are some possible solutions:

3.2.1. Creating awareness on the risks or dangers of using pirated software: Many people are not aware of some dangers associated with the use of pirated software on their computers or computing devices. There are many risks attached to the use of pirated software especially virus attack on the computer or the documents in it. But some people are only interested in getting the software irrespective of the source of it. To them, all the versions of software whether licensed or free download are the same. There is need for adequate education of the public especially computer users on the risks of using pirated software.

3.2.2. Restricting the availability of free download software on the internet: The software industry should develop a model that will ensure that free download of their software is not possible online. They should put in place mechanism that will allow only the licensed version to be available or downloadable. This means that everyone who wants to get the software must pay for it before he or she can download it. By so doing, the pirates or hackers will not be able to access the software let alone duplicating it or making it available online for free download.

3.2.3. Making the software very affordable to users: One of the major problems of getting or buying software presently is the high cost of some software. This has made some people to resort to using the pirated ones which can be bought at lower price or even gotten for free on the internet or from a friend and have it installed for use. When the cost of the licensed version is not much, people will prefer buying the legitimate software which has various features, free of virus and which is very efficient and reliable. So, the software industries should make software very affordable to an average user or person in the society.

3.2.4. Occasional software audit in organisations: Some organisations already have sufficient budget or funds; hence, the issue of financial constraints is not part of the reasons for them not to get their licensed software. In fact, some even have it as part of their budget. So, one expects that the staff of the organization will all be making use of licensed and updated software. But that is not the case sometimes. While the organization might have given each of the concerned staff members the money or fund to acquire their licensed software, some of them might not buy the new one but will continue to use the pirated one provided it can serve the purposes. In this case, the only way one can detect who among the staff members are using genuine software or not is by carrying out an audit on all the staff making use of computer or a particular software in the organization. This will go a long way in putting the staff on their feet, as regards the use of software. It will prevent or reduce pirates in various organizations and businesses.

3.2.5. Software should be easily available and accessible irrespective of location or country: As seen as part of the factors responsible for the use of pirated software by some people, unavailability of some licensed software in some places is part of the factors. There are sometimes that one may need one software for a particular design or task, and the software are not to be sold outside the country of the manufactures, for instance, India or South Africa. If the software is the only one that can perform that task easily or perfectly, the person concerned would have to look for a way to getting it by all means whether genuine or not. So, it is important for software industries or companies to make their software available and accessible globally but with the mechanism or model that will prevent hacking or piracy.

3.2.6. Regular updates of software by the software industries: One of the motivations to getting a software is when the new version has many features which are not in the pirated version, and which can make the works easier. If the pirated software can do the work that the licensed or genuine software can do, many people will not see the need to get the licensed ones which is even expensive. But when the software company is regularly updating their software, and adding various features that can solve the emerging or trending problems of the society, it will motivate some people to get it

especially those who want to perform their various tasks in up-to-date form or manner.

3.2.7. Applying legal approach: There is need for the regulatory authorities to take legal action against individuals and businesses selling pirated software. Some pirated software are sold in stores. Some are even sold in wheelbarrow or just along the street. Users of pirated software can be sued too if the company wants to do that. This will reduce the number of people using the software because of the high cost of procurement of the licensed ones, and which will lead to reduction in production in business areas and organizations and causing damage to computing devices. Hence, a moderate punishment like paying of little fine by pirates or users will help to reduce the use of pirated software in many parts of the world but should not be a serious penalty.

3.2.8. There should be a collaboration between software companies and government agencies: In Nigeria, there is a body called copyright commission. Some of their functions or roles are to regulate businesses which involve the production, public exhibition, use of copyrighted works; prescribe anti-piracy devices for use on copyrighted works; enlighten and educate the public on copyright matters; regulate, administer, enforce and prosecute copyright laws, etc. Somewhere companies can partner with such an organisation in different countries to end or reduce software piracy. This can be done through public enlightenment, enacting of laws and proper implementation or enforcement. The commission can also help to prosecute some people caught in the act, and by so doing, the software industries or companies can now rely on them that their property (software) is not illegally used in those countries they are having partners.

4.0 Conclusion

This research work made use of qualitative research method (descriptive and explanatory methods), and using secondary data such as library and internet sources, including published research works in related research areas, in order to investigate certain factors responsible for the use of pirated software on computing devices and the possible ways to reducing the use. From the results, it was shown that some of the factors responsible for the use of pirated software in some parts of the world are: availability of pirated software, high cost of licensed software, lack of adequate enforcement of the copyright law, unavailability of the genuine version some software in some countries or locations, etc. It was also observed from the results that some possible ways to stopping or reducing the use of pirated software in the society are restricting the availability of free download software, making the software very affordable to users, applying legal approach, collaboration between software companies and government agencies, software should be easily available and accessible irrespective of location or country, etc. It can be concluded from the results that there are several factors responsible for the use of pirated software on the computers or computing devices, but there are some possible solutions to reducing the use of it.

IV. RECOMMENDATION

It is recommended that software companies should make the price of software very affordable to the users in the society irrespective of the financial strength or countries of the users or prospective users. We also recommend that a more comprehensive work on this which will involve public inputs like the use of questionnaire or interview be carried out in future.

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