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Building Your Own PC

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Abstract

There are many debates on whether building your PC is better than buying a new one. With regards to money, creating your PC is cheaper, more rewarding and one can be able to customize it to his or her satisfaction, but it consumes a lot of time, and if one does not build it well, it will be a waste of time and money as well. Buying a new PC is quicker, secure, and reliable, but it will consume you more money than building your plus you cannot customize it. In this research paper, we are going to look at previous reviews concerning this topic. We are also going to research from secondary sources and perhaps administer short questionnaires to members who have gone through this and finally analyze and come with the final verdict on whether it is worth the hustle (time and money), to build your PC as compared to buying a new PC.

Introduction

Building PC is time-consuming than buying a new set of PC. Building a PC requires a lot of time starting with research on equipment, purchasing the equipment, assembling the equipment, and doing software configuration. By buying a new set of PC, you will need to research and ensure software configuration is perfect; therefore, there is no much hustle with regards to the time when buying a new PC. With regards to money, building your PC is much cheaper, and you can customize it the way you want, but buying a new set of PC will cost you a lot to purchase and customize it. There is also another finding that if you do not know how to build a PC, it is better to buy since building a PC with no knowledge about what is needed and how to achieve it or instead of applying guesswork will cost you more, consume more of your time. You may end up achieving nothing at all. Sometimes you beat yourself up for doing nothing, especially these Covid-19 times that are coupled with the compulsory quarantine. However, you can make yourself useful by trying something hands-on, and that is what this literature review is all about. The investigation is looking at past research that has shown that it is essential to build your PC rather than purchasing one from the shops. Most of the materials reviewed in this article show that the process can be daunting, messy, and not for the fainthearted but all worth every sweat.

Literature Review

Before delving further into the nitty-gritty of this literature review, Barnes et al. (2019) give step by step procedures of coming up with your PC. On that note, the notes that Barnes et al. (2019) provides in his book quip that to come up with a PC, the first step is to have a PCPartPicker which makes sure that all the parts of a PC are pieced together. The PCPartPicker,

as Cheung (1999) says, means that regardless of the PC you are going to build, all the pieces are the same, and they include a ³ motherboard, a CPU, storage, memory, power supply, a case, and a monitor.

Building a PC is a practical endeavor. Finding literature that gives you the technical nuance to the effect of coming up with a pieced up PC, which is working, is imperative. Barnes et al. (2019) and Miastkowski (2001) give these procedures that are followed when piecing up the components of a PC. They say that setting up a flat table where the elements will be laid for assembly is essential. At the same time, they also advise that carpets that could generate static electricity should be avoided at all costs. One of the mentioned arrangements that the literature notes are that there are other components that you should buy together for a specific PC. For instance, Cheung (1999) says that for a PSU, the power cables should be shipped together since they might fail to merge or fail in the long run if they are bought separately.

Further, one of the main things in building a PC knows which components fit which PC. Choosing a custom PC Spec (2019) is an article that gives guidelines on how to choose PC components. The report notes that one of the main determinants of motherboard choice is the RAM and the CPU. Additionally, Cheung (1999) writes that for the effective functioning of the various components of a PC like a PSU, you should check a specifications section to ensure that they are compatible.

According to the article “*Should, I Build My PC?*” (2010), when you build your PC, you can shop around for components, weighing up the best deals. On the other hand, Barnes et al. (2019) say that when you build your PC, you can customize it to fit your budget or even performance needs. On the other hand, Miastkowski (2001) states that the pride that comes with

the accomplishment is worth reliving, and he also writes that it is satisfying when all the pieces of the PC are finally put together by your hands and are working.

While purchasing a PC is effortless, it is costly and does not work towards conserving the environment by recycling waste materials. Thus, Boustani et al. (2010) and Choi et al. (2006) see building own PC as an opportunity to conserve the environment as they say it offers a chance to use waste material like metal casing. Additionally, some of the PC generate their energy instead of using fossil fuels, as Boustani et al. (2019) note, which is a significant way reduces environmental degradation.

One of the main issues that finally come to the spotlight is how long should my PC last. That question has been adequately answered by Choi et al. (2006), who indicate that a PC's life can end depending on various factors. One of the main elements he notes is obsolescence, which means when the PC can no longer be useful to the user, and they need a different one. Also, when a PC has performance issues like becoming slower and ineffective, the owner can dump it for a new PC.

Research Question

1. Is it worth the hustle (time, money) to build your own PC compared to buying a new PC?

The solution being sought here is whether it is worth building your PC2 or buying a new PC3. The theoretical framework will be set first, which involves setting variables and formulating hypotheses to answer this question. After that, the hypothesis will need to be tested and for this case reviews from secondary sources and asking people or friends who have at least build their PC maybe once or twice will help weigh the hypothesis which will make it easy compare and determine whether it is worth the time and money to build or buy a new PC.

Theoretical Framework

Variables

From the research question, there are two sets of variables, the dependent and independent variables.

Dependent Variables	Independent variables
Building your own PC	Time
Buying a new PC	Money

The Dependent variables are building your own PC and buying a new PC; the two variables all depend on the amount of time and money; therefore, the independent variables are Time and Money. When analysing the data, one will have to keep in mind that building your own PC and buying a new PC will be the dependent variables while time and money will be the independent variables. Therefore, at the onset of data analysis, how much time and money is spent in relation to building PC as compared to buying a new PC will be the main focus apart from other factors like customization.

Hypothesis

Since variables and research questions have been set, formulating the hypothesis will be the next step, and this hypothesis will come in 2 sets, i.e., the research hypothesis and the null hypothesis. The research hypothesis will be, “Building your own PC is worth the time and money as compared to buying a new PC,” and the null hypothesis will be, “It is not worth the time and money to build your own PC compared to buying a new PC.”

H0: Building your own PC is worth the hustle (time, money) as compared to buying a new PC.

H1: ² It is not worth the hustle (time, money) to build your own PC compared to buying a new PC. Both null and research hypotheses will need to be tested, which means formulating an analysis plan to answer the research question. As stated earlier, the research analysis plan will involve gathering information from reviews and secondary sources and also presenting small questionnaires to individuals who perhaps have heard an experience on whether to build or buy a new PC. The result of the data analysis will determine which hypothesis to go by. If the results present enough evidence against the null hypothesis, then the hypothesis to go by will be the research hypothesis, and the null hypothesis will have to be rejected. However, if the results will present enough evidence against the research hypothesis, then the hypothesis to go by will be the null hypothesis, and the research hypothesis rejected.

Conclusion

Most of the previous reviews seem to depict that building your PC is worth the hustle, i.e., it is cheaper, more rewarding, reusing some of the wastes conserves the environment, and one can customize it to their satisfaction. However, building your own PC is time-consuming, especially for a beginner; in fact, if you have no skills, it is better if one buys a new set; otherwise, it will be quite frustrating and time-consuming, and one may end up achieving nothing. Buying a new set of PC, on the other hand, is quicker and appears to be more reliable but if one wants a customized PC, it will cost more than building their own since they will have to contact the manufacturer to customize it or they will have to just use a “regular” PC.

Previous reviews are based on previous research or rather research done in previous years, and by now, a lot has changed. Technology is advancing day by day, and new innovations are kicking in, and the internet has made things easier, and therefore it is not well known if indeed it is worth building your own PC or buying a new one. Testing the set hypothesis will

reveal if indeed in this generation, it is worth the hustle or not, to build your own PC as compared to buying a new one.

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- This book teaches readers how to build their own PC from scratch from picking the right components to testing the finished product.

Cheung, J. (1999, Mar 19). Components play key role in PC building. Computer Dealer News, 15, 31. Retrieved from <http://ezproxy.libproxy.db.erau.edu/login?url=https://search-proquest-com.ezproxy.libproxy.db.erau.edu/docview/202791907?accountid=27203>

- This article I found in the Hunt Library talks about PC components and how to choose the right component to install base on your goal to why would you want to build one.

Choosing a... custom PC spec. (2019, March). Computer Shopper, , 60-61. Retrieved from <http://ezproxy.libproxy.db.erau.edu/login?url=https://search-proquest-com.ezproxy.libproxy.db.erau.edu/docview/2186951108?accountid=27203>

- This article I found in the Hunt Library talks about the benefits on why PC building is more cost effective than buying a new one and why it's a good idea to future proof your PC.

Miastkowski, S. (2001, September). Build your own PC. PC World, 19, 88-92. Retrieved from <http://ezproxy.libproxy.db.erau.edu/login?url=https://search-proquest-com.ezproxy.libproxy.db.erau.edu/docview/231432820?accountid=27203>

- This article I found in the Hunt Library shows a step-by-step guide on PC building and the components required. It also includes illustrations to help guide the builder.

Should I Build My Own Computer? (2010, December). Popular Science, 277, 96. Retrieved from

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- └ This article I found in the Hunt Library talks about the benefits and the pros and cons of building your own PC and where to find the best deals for component shopping.

Boustani, A., Graves, S.C., Gutowski, T.G., & Sahni, S. (2010). Reusing personal computer devices - good or bad for the environment?" Proceedings of the 2010 IEEE International Symposium on Sustainable Systems and Technology, Arlington, VA, 2010, pp. 1-6, DOI: 10.1109/ISSST.2010.5507714.

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