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RESEARCH ARTICLE

A MARKET ANALYSIS OF CUSTOMER PERCEPTION TOWARDS ANTI VIRUS SOFTWARES

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Antivirus is a solution which helps in detecting and blocking the programs of internet that threatens all the devices which comes from emails, websites and USB flash drives. Viruses once settled into the devices change the setting of the devices, slowdowns it and prohibit programs and files and let the hackers to hack all the personal data. The software of virus protection is designed for the devices to run seamlessly. This paper outlines the customer value proposition of antivirus across the software providers in India by targeting sectors like education, banking, automobile, IT etc. Several questions were asked from the people from various background which helped in determining many factors such as different types of difficulties faced due to the viruses in the devices and in what form, the purpose of using antivirus, did they purchase the licensed antivirus software or went for the trial version that was available and the important reason of choosing antivirus, alternatives to antivirus and were those alternatives better than the antivirus.

INTRODUCTION

Threats of internet these days are known as malware due to the way they attack devices. Solutions these days comes with wide options from protection in a basic way to full- fledged security of internet like managing passwords, filtering of internet and controlling of parental. We need to protect the confidentiality of data. Be the data on a local machine or on server we also need to protect data's availability and integrity. All the applications must be genuine before they can access into the data. Antivirus has become more like a service on the local machine. The installation of the server of antivirus is done on the cloud and along with the agents, the client machines are deployed. The comparison of fingerprints of application is done by these agents. Before an application has permission of creating, accessing, and modifying of the data, these agents compare the fingerprints against the local database. Since it is better to have a database of few applications than having a database of millions of virus signature, the database of all the applications which are known is maintained. The software of antivirus which is installed in the device must be able to communicate with the service of antivirus which is installed in other machine so as to verify if the application is genuine. Most companies these days keep safety of devices as its top priority. They know for a daily business operations having a virus free workstation is really important to the success of the company.

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They need to ensure that hackers don't attempt to get into the systems interface with production or attempt to take company's confidential information. The antivirus used at home offers a protection to the devices to an extent therefore it is always better to use a solution which is tailored to the devices which are used for the business purpose. Antivirus software in small business have features of protecting threats which are very common in the workplace settings, with the capabilities of providing the best malware-blocking solution. From the survey which was conducted it was observed that people knew a lot of other antivirus apart from which they used. Quick heal was known to be the most common brands. Questions were also asked to know if the customers were aware of any other alternatives of antivirus and if those alternatives could provide the same benefits. It was noticed that only half of them knew about the alternatives and in that very few preferred alternatives of antivirus. One of the main reason behind this was better security an antivirus provides.

MATERIALS AND METHODS

Comparative study of customer value proposition for the end users/ individual customers was carried out on Survey Monkey. The sample size was 310, questionnaire consisted of relevant questions regarding their preference of the available antivirus software. Covering every aspect like gender, age, and occupation of the respondents to get a clear and in depth insight regarding the study. Pilot survey was also conducted on corporate people to study which anti-virus their organization uses and for what purpose.

A sample of 11 corporate was taken and their survey was analyzed to reach to a conducive conclusion

LITERATURE SURVEY

OPSWAT has released a market share report according to which it can be analyzed that Avast leads the antivirus and anti-malware market. It has 21.4% of the market share followed by Microsoft, AVG, etc. as depicted in Fig. 1. Antivirus product market share is led by Microsoft security essentials with 17.8% closely followed by Avast free antivirus. More than 90% of the devices had not been scanned by their installed antivirus in last 7 days. Avast and Microsoft are the dominating products in the market of antivirus and anti-malware while all other antivirus show a single digit market share. Since Microsoft’s windows defender is a feature of windows 8 and 8.1, it was not included in this report.

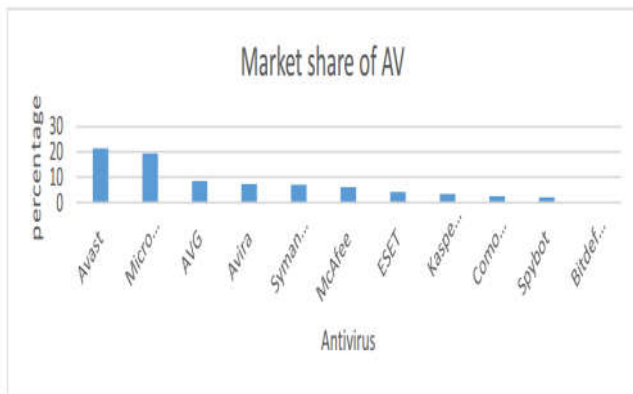


Fig. 1. Market share of Antivirus

Most companies believe that they cannot drop antivirus. The things which security experts asks us to avoid, at times employees tend to do those things, such as visiting the sites which are not trust worthy, clicking on the attachments which are not safe. In order to meet the regulations of industry, companies have a software which secures its desktop such as Payment Card Industry (PCI), the standard of data security. Such companies have no choice but to pay for the antivirus software. According to few businesses, they believe in spending less on the software which provides security. They feel they can spend that money somewhere else rather on spending in antivirus. When asked to differentiate between the free and the paid software, customers feel there is a difference in terms of speed and effectiveness.

Report Analysis

A survey was carried out in which customers and industry people were asked about the value proposition of antivirus and about its alternatives. It was observed that majority of the users of Quick Heal, Norton and Kaspersky preferred buying the licensed version of the software. This might be related to the difference in performance of free and licensed version. On the contrary, most users of Avast have always settled for the trial version which may have something to do with the difference in the validity period offered by trial version of different software available. Because of the feature of the inbuilt antivirus software most users opted for McAfee, AVG and Windows defender.

It was also noticed that Quick Heal is the most known brand out of the seven brands which were asked in the survey. The two most important factors are features and customer support. Antivirus providers feel with the paid product they get better customer support and customers get better features. Avast free antivirus tops amongst the free products because of the effective malware detection score with a speedy and a package which is well designed followed by Avira antivirus software. Customers like the way it is easily installed having a design which has a smooth interface and having almost no impact on the performance of the system whereas Norton antivirus tops in the pack of paid software because of its excellent feature of malware detection. It has a good scan speed with a nice interface design.

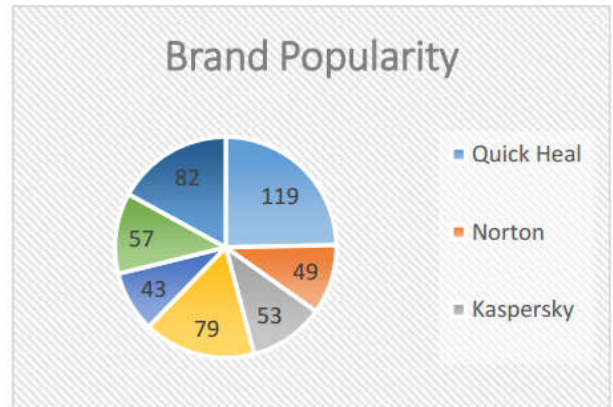


Fig.2. Brand Popularity of Antivirus

It has all the tools which can analyze the performance of the system with tool which can also analyze the reputation of the file. Because of the feature of malware detection bit defender is on the second place. It was found that protecting the data was everyone’s priority when it came to usage of antivirus software, followed by system scan, malware protection, online protection/firewall etc. For the users of Quick Heal, Norton and AVG antivirus, brand reputation mattered the most while buying. Users of Kaspersky and McAfee gave more importance to price. Majority of users of Avast and Windows Defender paid more attention to the rating before buying them. An antivirus software offers a variety of features to the customers so that they could protect the data, secure the functioning of their applications, scan any foreign device before making use of it. Less than half of our respondents replied having known of an alternative to an antivirus, with more than half (54.55%) of our respondents not aware of any alternatives to an antivirus.

The alternatives that respondents mentioned are:

- Disabling pop up settings
- Windows defender
- Using Linux
- Clear unwanted files

It was found that only 27% of respondents felt that alternatives to antivirus are better than the antivirus themselves. This survey indicates that customer’s feel antivirus are better than the alternatives of antivirus. The reasons mentioned by respondents were:

- Better security and good control over the installation of the files
- Linux

One of the customer value propositions is a good service that an antivirus provides and according to the survey conducted around 81% of customers felt they were satisfied with the service of the antivirus company. Based on the rating taken on antivirus software, offering value for money, we can conclude that majority of users have given a high rating to Quick Heal antivirus software, followed by Windows Defender, McAfee, Avast, Kaspersky, Norton and lastly AVG.

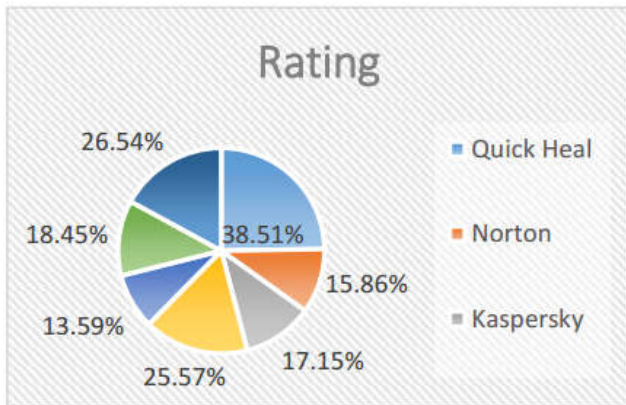


Fig. 3. Rating of Antivirus

Case Reports

Case 1: Customers prefer a software which has all the features regardless of the price they need to pay for it. Manish who is a software developer says that he has tried many antivirus software’s and is finally settled in with Quick heal. He says that this software has all the features that not only manages his computer but also fixes what’s wrong. It covers the protection of virus. It works with a little interference in the background and runs synchronously with the system resources. He started with a trial version of 30 days and after two days he upgraded the software. His advice to the people who are not technically sound and need a software that would work to keep from making mistakes which are critical and keep their system to run smoothly to go for quick heal. He told it works the way we want and best part is that we don’t have to keep a watch on it. He also says that after installing quick heal software we don’t have to worry about the screen getting blue or the system getting slowdown. He says this product works as good as this does. Software has an annual fee but it is worth more than its money. He also mentions from his practical experience that antivirus will not become obsolete. He believes that, in order to keep up with the fast pace of the threats, the producers of antivirus have to set up their game against the cyber criminals and this can be done by adding more features to their products which can counteract the attacks by cyber.

Case 2: Many customers believe that the customer value of the antivirus software will be same in the future as it is today When Nikhil was asked about the customer value of the antivirus software in future, he told that the future of antivirus software will be same as it has been. He says that antivirus software is something which is required by law at times, to exist in the

devices such as computer and phone. He doesn’t have any idea about the technology which is been used by the developers of the antivirus software. It can be morphed and incorporated in future with any technology which is perceived to be useful for the local machines. He tends to judge antivirus software on accuracy of both detecting virus and not flagging the files incorrectly which are Ok. He says any antivirus software should be able to clean the virus. He also said that to the feature of today’s antivirus is very different from the original one that started the industry. Today the antivirus acts as a front end to the user and the management system of the workstation which helps in managing the license, protecting the password by having the password managing systems and by controlling the user access. Antivirus software is a primary contributor of today’s technology which is known as big data which not only collects the data about security but also protects it.



Fig. 4. Customer perception of antivirus

Case 3: Antivirus can fit into any diverse need because of its different shape and size. Neha recommends McAfee as a trust worthy application for the android phone which runs effectively. McAfee powers Hi security which secures the mobile phone with the best protection service. It has a feature in which a customer will experience a secure android without any threats like malware or Trojans. She says McAfee scans and kills the virus effectively on both SD cards as well as internal storage devices. She does not advice the same when it comes to PC. She says it is complicated because of the various other products which are available in the market. When a customer is looking for a less price antivirus software which provides the best security, he or she should go for Avast. According to her there are many products in the market but it's up to us how we narrow down our options considering the budget and features which are important to us.

Case 4: Customers have started relying on the alternatives of antivirus, and considers them to be one of the best virus protection software. Amit considers window defender as the best software which protects the device in the best way keeping in mind the price. He says it comes free with windows on our windows PC or windows laptop. It gets updated automatically and it also has an option of manually starting the update of windows. He believes that the basic antivirus is all about protecting the device from the viruses which have been already discovered and are placed as "blacklist". Hackers are not noticeable when they hack the device. We just need to set our mind like that. The only thing by which we can protect our device from getting hacked is by updating the software. Heuristics in windows defender automatically detects the virus which are not defined. He sees Microsoft as having a resource which can hire best antivirus developers. As Microsoft has become better at protecting its operating system, it is making more money by selling windows OS more frequently.

Case 5: Few customers prefer free version of antivirus software because they don't find much of a difference when compared to the purchased version of the software pack. Deepak considers Avast free antivirus like an all-round virus protection software. He says that the speed of scanning is very good which is nearly 90 seconds. It is designed in a user friendly manner with easy installation process and having a smooth interface design with almost no impact on the performance of the system. He says that the best part about Avast free antivirus is that it does not identify malware as a safe file which other free antivirus software does. It also disinfects the computer thereby removing 80% of the active malware.

Conclusion

Hence I would like to conclude that one of the most important aspects of laptop, computer or phone antivirus protection is that how well an antivirus detects and blocks the threats of internet. By checking malicious activity which is not registered in the database, antivirus software provides security to our devices thereby blocking and eliminating it. Talking about its customer value proposition, irrespective of the alternatives which have come up in the market recently like windows defender, people still prefer antivirus as the best software which can protect the devices from all the unwanted internet threats. Even in the future it is considered to have the same value as it has today provided the producers add more features in to it. Quick heal antivirus software is considered to be the best and popular antivirus software which protects the computer in the best way possible and for the people who don't want to spend much on AV, believes that Avast has all the features which can protect their devices from all the malicious activity which could affect their system.

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