Article

Revealing Social Media Phenomenon in Time of COVID-19 Pandemic for Boosting Start-Up Businesses through Digital Ecosystem

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Abstract: When the world was engulfed by a COVID-19 pandemic crisis, various activities could not be carried out normally. Activities may continue from home during a crisis by the use of a smartphone through the internet, because almost all people have their own smartphone, without requiring additional purchase of hardware. For formal learning, people can take the opportunity to use social media platforms to undertake conversations easily by using smart phones, even tablets. Teenagers or adults who are still studying in higher education institutions can undertake continuous learning for their work assignments. For example, they can use these tools to communicate through social media such as the WhatsApp, Telegram, Zoom, Microsoft Team, and Edmodo apps to connect with friends and lecturers. This research reveals trends of digital social media security and usability in the time of the COVID-19 pandemic situation, such as working from home, establishing a start-up, improving business processes and conducting online business within the digital ecosystem. The result is interesting and there are many uses of social media which have been addressed in this study during the COVID-19 pandemic for business purposes. The various social media platforms have different features that are available for use by subscribers, and also make it easier for people to do business. This is mainly due to the fact that they open up the global market and also make it cheaper to advertise. The government as well as the private sector has been in the forefront when it comes to the use of social media. Maintaining a good online presence is one of the key aspects that determine the success of start-up companies. This is due to the fact that most customers usually rely on the customer reviews in determining the ability of a company to meet the needs of clients. The main reason why most companies set up a customer relations department that is mandated with the responsibility of responding to customer feedback on various online platforms. On the other hand, the increased use of social media has brought new challenges when it comes to the security of information. Users must, therefore, secure their servers and technology from external and internal threats. One of the strategies used is the use of passwords to log into a portal where each person authorized to access the portal is provided with a password that is unique and known only by the user. The study has covered all these areas in detail including the use of database management systems in an organization or individual.

Keywords: working from home; business from home; COVID-19 pandemic; security policy; information security; social media for learning; social media for business

1. Introduction

The catastrophic situation caused by the COVID-19 pandemic has had an impression on the whole world. For example, starting from 12 March 2020, the working and schooling from home periods were imposed, first until April 2020, and then were extended to January 2021, due to the second wave of COVID-19 emergencies. However, people's activities may have increased in order to continue to fund activities in the house during a crisis through the use of a smartphone via the internet. This is because almost every person has their own smart phone without requiring the additional purchases of hardware. For formal learning, people can take the opportunity to use social media platforms which enable easy conversations such as through the use of smart phones, even tablets. Teenagers or adults who are still studying in higher education institutions can transfer work assignments easily through these for continuous learning. For example, they can use these tools to communicate through social media platforms such as the WhatsApp, Telegram, Zoom, Microsoft Team, and Edmodo to connect with friends and lecturers. Students can share information about social media to deliver work, especially using platforms such as Padlet or Google Drive. Students can undertake video assignments using applications such as Macromedia Flash, Filmora or Movie Maker. The lecturer can use the platform above online to conduct a dialogue as well as a conversation with students in the presence of a wireless circuit through applications such as Zoom or Skype from their homes. Employers and workers may interact by using technology transfer, transferring documents and sharing information about their current work status. People may benefit from using an open source platform to carry on conversations easily to read and gain new knowledge during the COVID-19 outbreak by reducing their movements outside the home and spending time more effectively [1–4]. For example, they may register for free with an e-learning platform through easy switching between providers. Platforms that can be found such as Udemy and Coursera provide free courses for students to learn and review subjects related to subjects or life skills and various subjects using video. For informal courses in particular, these can be used to continue learning using information technology (IT) through various social media channels. Families, mothers and fathers at home may gain new knowledge such as cooking, gardening, financial management, healthcare, how to eat and exercise methods using social media such as YouTube. Grandparents and grandmothers and their children and grandchildren, siblings, brothers and sisters can communicate through social media such as Skype or Zoom and digitally using transferable technology. Many tutorials on using these social media applications can be found on YouTube. Those who need religious material may find it easily and appropriately on their smart phones, such as the scriptures of their respective religions, for example, to access the Qur'an and Hadith. For young children, in addition to films and opening applications that feature games, they may also take the opportunity to learn and use easily transferable applications and social media such as language learning, guessing, learning coding with the help of their mothers and fathers. This pandemic makes it difficult for people to move to obtain goods such as food. Therefore, e-commerce can be used to buy food online without the need to go to the market and be able to avoid the crowds of the crowd. Matters relating to finance such as bill payments and transfer of money may be conducted to carry out the use of bank services above online without the need to place and location. People can also use social media such as Telegram, Instagram, Facebook, which are provided by the National Disaster Management Agency and the Ministry of Health by providing valid information and the latest data regarding COVID-19 status [5–7].

However, this situation has resulted in the tourism sector being temporarily paralyzed, so that unemployment is increasing because tourism is one of the platforms that provide employment for the community around the tourist attractions and the community from outside. It is not only the tourism sector that has experienced paralysis, but employees from other types of companies are feeling the effects of the COVID-19 pandemic. During the COVID-19 pandemic, the communication and marketing patterns will be more through digital canal. Today, digital communication media and social media is an effective and

efficient choice for communicating with the community. Therefore, changes in patterns and use of communication media used by the community need to be well understood before the steps of delivering a message are carried out [5–8].

This research revealing trends of digital social media security and usability in time of the COVID-19 pandemic situation, such as working from home, making a start-up, improving business processes and conducting online businesses within a digital ecosystem. The result is interesting; there are many uses of social media which have been addressed in this study during the COVID-19 pandemic for business purposes. Social media connects people across the globe where they are able to keep in contact and share their experiences. The various social media platforms have different features that are available for use by the subscribers. Social media has also made it easier for people to do business, due to the fact that it opens up the global market and it is also cheaper to advertise. The government as well as the private sector has been in the forefront when it comes to the use of social media. Maintaining a good online presence is one of the key aspects that determine the success of start-up companies. On other hand, the increased use of the social media has brought new challenges when it comes to the security of information. User must therefore secure their servers and technologies from external and internal threats. One of the strategies is the use and encrypt the password to log in to the portal where each of the persons authorized to access the portal is provided with a password that is unique and only known user. The study has covered all these areas in details including the use of database management systems in an organization or individual [9].

The paper is structured in the following way. Firstly, in the literature review section we would illustrate in detail for each of the terms used and how the benefits of social media especially during pandemic. Secondly, we discussed the methods used in gathering the data and what are the limitations that we had. Thirdly, the key differences and similarities between uses of the terms are shown and discussed with supports from findings in literature that is related to research in the Social media security area. In addition, the different views of the use of Social Media are introduced using real-life examples since it is the foundation to the understanding of these terms. Finally, the results of the different views are discussed in the recommendation and conclusion part as some recommendations would also be given.

2. Literature Review

2.1. Challenges of Adopting Social Media to Business Environment

Since the beginning of introduction, social network sites (SNSs) such as Facebook, Twitter, and WhatsApp have attracted millions of users each day, utilized as a major part in the daily practices. Although the main technological features remain consistent, the cultures that evolve around these social network sites vary. Social network sites can be defined as web-based services that enable individuals to develop a public or semi-public profile in system, collect a list of other users with whom they share a connection, and view their list of interactions created by others within the system [10]. The nature of these connections differ according to the sites. Social media is seen as a Web 2.0 development, in which built on the idea of a user-driven, interactive web. On many of the major SNSs, the users are primarily communicating with people who are already amongst their extended social network, instead of looking to interact with new people [11].

With the appearance of social media today, it allows people to share their live experiences no boundaries. The explosive emergence of interactive web services changes the way users communicate, in addition to their new ability to create and publish more content of their own. In the race to remain competitive and relevant, many big and small businesses utilize the publicly available social media platforms to engage communications among the employees. With the continuous advancement in information technology (IT), the nature of businesses from all aspects has been transformed to adapt and survive, and social media platform are arguably believed to play as one of the key tools in the evolution of business marketing. The strategy of social media provides a platform to contribute content,

describe content, find content, build community, start and continue conversations. There are a vast number of social media platforms offered and people only have to choose which platform suits them and easily to use. If utilized efficiently, with effective strategies and management, organizations are now offered a while new platform which has the ability to restructure the way their products and services are presented to consumers [12–17]. Some of the potential opportunities social media may embrace:

(a) **Revenue:** Social media plays a big role in getting leads generated, as it is effective and inexpensive to practice. Hence, increasing the overall sales to the businesses.

(b) **Brand Awareness/Development**: Through social media, it allows direct interactions between businesses and consumers on a more personal level. Hence, giving the business its own voice to further develop the brand. Businesses can also attract more consumers by having them engaged with the interactive methods with features such as Questions and Answers and Polls on Instagram. At the same time, it allows instant feedbacks from the consumer. The time gap to identify the success of a project/campaign can be shortened; therefore, adding up to the competitive advantage value for the business.

(c) **Networking**: Using online networking sites, such as LinkedIn, can be valuable for businesses to connect with a wider range of like-minded people to improve the way the business operates. Both in the short and long term, this is often for the purpose of exchanging ideas and future referrals. It is a network area in which employees can establish relationships with one another within the organization, or with other business personnel in the industry itself. Through social network sites, the learning with diverse opinion and having exposure to multiple perspectives are now becoming more possible.

(d) **Recruitment**: Today, many organizations have specialists in Human Resource (HR) department that search for profiles in social network sites to recruit new workforce. HR managers can also create their own database according to the criteria required, directly or indirectly. Another advantage is that the online platform does not have any boundaries, thus, generating a bigger selection range of candidates.

Referring to [12,18], the characteristic of involvement relates to the high response from other users towards a specific topic that eliminates the barrier between the participants and the media itself, and describes openness as the willingness of social network providers to receive reviews in the shape of suggestions and criticisms concerning their services with the aid of user ratings, mentions and dissemination of information. It is agreeable for content that is protected by a password to be disregard by users, he adds. The sense of community enables social networking users to exchange information effectively and at a rapid speed mainly due to the availability of different communities across social media that can cater various types of interest. Lastly, the main component of social media is its ability to easily connect user to content they are looking for without breaking any of the connectivity that has existed between them. As suggested by [4,5,19], social media aids in the development in business tactics in the form of attracting customers' attention and developing a wider acceptable organization image. They described that there are six benefits of adopting social media to businesses, (1) recommendation and suggestions can be gained from the communication between the organization and potential customer, (2) social media helps in improving the organization's customer service by enabling communication with customers for instant assistance regarding their transaction, (3) the use of social media is cost efficient especially for marketing and promotion of business, (4) trends and interests can be monitored and identified to effectively cater customers attention and demand, (5) social media helps in establishing brand awareness, and lastly (6) sales and business traffic can be steered towards the business by increasing the company's market share through social media [3,4]. One of the best social media tools that can enhance a business process, especially in marketing, is Facebook. There are several reasons why businesses nowadays have shifted their focus on advertising through social media, specifically Facebook, such as

1. Ease of finding contact;
2. Access to notable personnel;
3. Construct better relationship;
4. Enrich exposure;
5. Niche marketing made easy;
6. Better positioning of business links in search engine;
7. Little to no cost incurred.

There is a significant loss in control for an organization to manage its social media, as this medium is constantly operating daily without stopping, as the frequency of user utilising social media to connect and exchange information with other users. Here, the difficulty in managing dialogue and content within social media, whereby handling dialogue between the company and different user requires different response, in such factors such as identifying the type of "person" the company is when multiple employees are managing the company's social media. Social media has transformed the way businesses conduct their operations. Interaction with customers possibly conduct with ease through a variety of social media platforms. Organization only requires accommodating the virtual community present within social media. There is also a similarity between virtual and real-world community, with the only difference being the absence of real-world limitations or restriction present in virtual, online community. Integrating social media as a public relation initiative can help the organization to gain a firmer strategic advantage. Having the capability of innovation towards social media processes will allow the business to gain a strategic advantage, such as a blog that can be used to influence the public towards certain opinions and provide other potential customers about their experience dealing with the organization [20].

Social media has become a fundamental business component for their growth due to the benefits the companies can gain. First benefit is that it can increase organization exposure worldwide. As social media is one of the most cost-efficient marketing method, it can engage more with the audience. For example, using open source CMS (content management system) to create the company's website and publishing to the internet. With the website, people can simply peruse the content which consists a lot of useful information about the company and their services. The shared content from the company can lead to acquiring new customers, business partners and even sponsors. The next benefit is that it can improve customer satisfaction, as social media creates a voice for both the company and the customers, allow them to feel appreciated knowing that their comments or message are being noticed. In addition, organizations use personalized response as it more effective in this process compared to replying with automated message. Lastly, social media can provide organizations with information about their competitors by monitoring them and keeping close tabs. Such information includes how they interact with their customers, their posts, content and design. By comparing their performances, the organization is able to check their own performance and determine how they will stand up to their competitors.

2.2. Social Media Information Security

To enable effective social media application towards business processes especially in the time of the COVID-19 pandemic, several factors need to be considered before investing in such significant addition. There is a heavy emphasize regarding an information to be secured and free from unauthorized access. The term *information security,* in the opinion of [19,21–23], is characterised as information conservation and its support components comprising of the hardware and systems being used to manage and transfer the information. Companies and organisations now have becoming vulnerable everyday due to threats in security, both internally and externally. Increasing threat in social media crime has risen the application for a better information security. It has become vital for companies and users to safeguard important information from external threats as the attacks have now become more sophisticated. Although, since application of information security is mandatory in most government and business sector and its importance has been highlighted, the ease of

use of this system software was not fully recognised. Companies and organisations' concern in protection against security attack have overshadowed the ease of use for employees to a point that it becomes difficult to use. It is vital for senior managers and middle level management to understand the adoption and the ease of use and compliance of information security measure. Physical information security as well as training of employees in policies and practices need to fully be realised and communicated throughout the organisation. Managers play an active role in developing strategy and support in training to show positive influence towards acceptance on the implementation of security software [23,24].

Nowadays, in this technology era, businesses all over the world rely on some form of technology, i.e., social media, digital communication or services to conduct day-to-day business, which include websites, online finance (banking), interaction with customers (marketing, social media, shopping). Organisation in different forms, majority consist of businesses has experienced breached or attacked. Furthermore, according to IBM Security and Ponemon Institute on a survey that was released (2018 Cost of Data Breach Study: Global Overview), over 477 companies from 15 different countries and regions have experience data breach over the past 12 months. The average cost of data breach has totalled to USD 3.86 million and the average size of data breaches increased by 2.2 percent. The probability of material breach in the next 24 months will average to 27.9 percent and South Africa has the highest probability of data breach, averaging to about 43 percent. Companies and organization that utilized third party involvement to secure data will incur up to USD 13 per compromised records for an adjusted cost of USD 161, up from USD 148 per record. Efforts for a major could migration during the breach will incur a cost of USD 12 per capita cost, for an average of USD 160, up from USD 148 per record by IBM Security & Ponemon Institute LLC.

Data Security Breach refers to failure to protect sensitive information that are confidential and unauthorised access of information systems. The nature of hotel operations is obtaining personal information (such as name, address, credit card number) from guests for reservation purposes and customer loyalty programs. Failure to protect or secure information about guests will lead to identity theft, mainly credit card fraud. In today's world, credit card payment is seen as the most convenient method of payment transactions in hotel industry. With an increase number of usages, cardholder's information has become the main attraction for potential impact of information security breaches. It has become increasingly difficult to evade from these security breaches due to the vulnerability nature of network security practices by hotels and low-tech computer systems, which is attractive for hackers. Potential consequences to this event are hotel brand reputation, financial cost, shift in consumer behaviour towards hotel industry. Information security breaches from the hotel services could lead to reduction in quality services, experiences and the overall satisfaction of guests. There are numerous types of security attacks faced by hotel industries in recent study; these include virus attacks, sabotage of data networks, system penetration by an outsider and spoofing. The main tools used to protect against security attacks are antivirus software, physical security and firewall (software and hardware). These attacks remained within the organisation in order to protect public trust and to prevent other hackers to perform similar method of attack. Hotel industries are ill-prepared to protect guests from network security issues [22,25–28].

3. Methodology

3.1. Research Characteristics

Social media has become a phenomenon in the business world especially in time of COVID-19 pandemic; however, the research on the benefits, the extent of which the organisations for both private government sectors is limited. Thus, journals on how successful social media can bring them benefits are being used to compare the differences occurred on how these organisations are using different platform to convey their messages to the public while aligning with their business strategy to stay ahead of their competitors.

However, this study is based on the social network benefits by incorporating firm's social media to achieve their goals towards success. The demographic areas in which the survey is being conducted will also be described alongside with the sample population and the research design. With this investigation, the authors are able to gain wider insights on the benefits of social media to boosting start-up businesses. The data being gathered in this study in order to grasp a deeper understanding about this issue utilize both primary and secondary sources. Both sources are being used in making the report order to increase the accuracy and the reliability of the data so to make the information collected more reliable and accurate. Most secondary data are mostly oriented by using the published scholarly articles in order to support the case with the evidence provided. While the primary data are collected through the survey that collected from four different types start-up that consist both private and government sectors, involved more than 20 organizations. Despite the limitations while gathering the data to be used in this study, the issues and the benefits of social media in start-up business will further be elaborated in this report.

3.2. Target Respondents

The report expects to be involved or participate in this research project mainly from both public and private sectors. Number of respondents per organization is rather flexible in order to accommodate the convenience of the respondents who are genuinely working in the related field. The respondents need not to be IT background or IT related, it is sufficient if the respondents use social media or any other system in their work daily.

3.3. Process and Benefits of Survey Questions

A total of 54 questions are prepared and constructed for the survey both physical and online. Online questionnaires provide convenience for respondents in answering survey questions with regards to what the researchers need. Furthermore, online questionnaires are not time consuming hence it will be efficient to continue the research as the results from the questionnaires will be automatically saved and calculated. Additionally, it is also a cost-efficient way as it uses free online programs in move the questions from paper onto digital platform such as google form. While for the traditional surveys which includes pen and paper, the benefits would be the ease of explaining the questions on the spot if respondents do not follow the meaning of the questions.

3.4. Research Approach and Design

The survey that was given out consist of both quantitative and qualitative research method. By using the mixed methods, the authors can better evaluate the findings and give more accurate view on the impact of social media towards the start-up organisation. Quantitative research method is based on generalizing the sample size of which the survey is being distributed. The survey that are being distributed will be giving the focus population options for each of the questions in which the authors can calculate the percentage the total poll so that the overall analysis can be determined by the end of the research. The statistics that can be generated from the questionnaires can formulate the patterns as fixed variables are being used.

Meanwhile, qualitative method is also incorporated within the survey that are being distributed in the form of open-ended question. This can provide the authors a proper insight according to the settings of the problems and hence, uncovering the truth behind the issues while supporting the numerical evidence that is being gathered by using the quantitative data. Moreover, the authors can also gain the opinions of the people which is being affected by the social media that are used by the companies, allowing the authors to develop a hypothesis to support in ensuring the reliability and the accuracy of the data being collected.

3.5. Questionnaire Method

To ensure that the sample population in which the surveys were being distributed to understand fully of how social media can benefits a start-up organisation in their business, a brief introduction of the advantages of social media is listed out. This context anticipates the respondents to relate their current situation towards the issue that are being studied. The survey that was given out consist of few sub sections concentrating on the parts being examined. This consist of the personal information of the individuals which is defined as the demographical area, followed by the information awareness in which the degree of which the respondents' awareness of the internal system can be measured. Next area that is being measured also includes the employees' attitude towards information security system, social media awareness and the relation of which social media with business. As we only focus on both private and government sectors, the sample population is quite limited, although the position of which the respondents are holding in the company might differ. The duration of which the survey is being distributed and collected is only within 2 weeks of time. At the end of the research study, the authors manage to get about 20 respondents with evenly divided into government and private firms.

4. Result

Social Media Awareness: COVID 19 Pandemic

Figure 1 visualized the respondents feedback; 55.6% of the respondents admit to using business social media account for exchanging information within the network. A total 33.3% have no knowledge to their usage of business social media account. Lastly, 11.1% primarily use the account to post information. Based upon respondents from all four organizations, majority of them use their business social media account for both posting and seeking information. Consider in the marketing department, using social media has proven to be beneficial and cost effective. Through social media, an organization can collect information regarding their overall performance, and build upon this information to improve and enhance their product or service. This is comprised of numerous retail shops and one hotel, and can monitor the level of customer satisfaction by analysing feedback and suggestions their customers have provided them with regarding their service or product. The effort to establish a proper and easy-to-use mean of communication using social media tool to handle a customer's concern is essentially providing the organization with a cost-effective upgrade to its customer service.
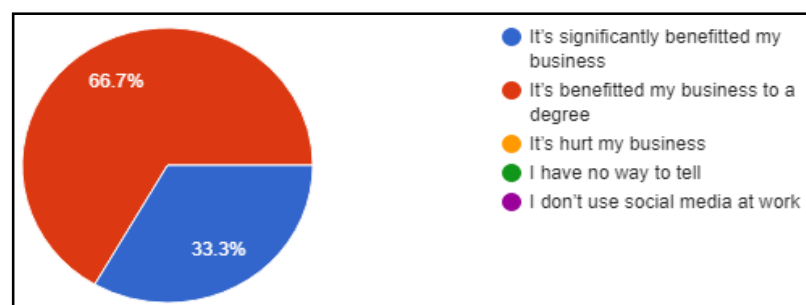

Figure 1. "If you use social media tools for work, has their usage benefitted your business?".

Figure 2 indicate that the utilization of social media platforms are substantially beneficial to organizations. Social media platforms have revolutionized the manner in which these organizations do their business by making business processes easier and delivering information to prospective customers expeditiously. Social media platforms provide a number of communities and groups such as WhatsApp, one of the most popular instant messaging allow a user to create a group with more than 200 participants per group. Other example of social media communities is Facebook where it allows a user to create a page to gather large number of people with similar interest. It is clear that most respondents spend an average of one to 12 hours per day engaging on social media where there are

several popular platforms such as Snapchat, Instagram, WhatsApp and Facebook which allow instant interaction globally and can get more audience through these platforms which cause people to fully engage with it for hours. Most users use social network to find information using social network because it acts like a platform where people can build social networks with people who have similar interests and activities. Hence, it is easier to find desired information from social network. For example, by using Instagram, people can use hashtags to find the products or services they require. Secondly, the users used social network platform to stay connected with friends and family. This is due to social network nowadays provide real-life interactions through video chats or calls to stay connected with those who are in different parts of the world with different time zones. Thirdly, users take the advantage of social network to share videos, pictures and videos. Sharing videos and pictures can be done easily using social network and can be uploaded instantly as well. For example, using Facebook, the users can share their photos and videos globally with large audience. The importance of social network depends on how the individuals utilized the use of social network. Some users use it mostly for business purpose and the others use it for personal purposes such as to stay connected with peers and families. As for employees who works in an organizations, social network is seen as a powerful marketing tools to project their products or services to larger and potential audience. This can also help to create brand awareness and show the good image which represents the brands or the organization. This can also help to increase customer loyalty as well. Social network is considered as one of the most used channels to communicate with consumers to gain positive and negative feedback which can be used to improve the organization. Privacy policies in social networking means gathering personal data from a user of certain website such as a member or subscriber or as customer. This personal data being collected by a particular website should be used according to the law basis and not for personal use or exploiting the data. Privacy policies are effective is social networking sites especially for social application platforms such as Facebook, Twitter, Instagram and Whatsapp. These platforms contained huge data of personal information of the users as Facebook has millions of users around the world and same goes to Twitter, Instagram and WhatsApp. Effectiveness of privacy policies is depending on how the users shared their personal details to their social networking sites. Despite having privacy policies, there are still cases of identity theft, cyber-bullying and online victim of stalking. Personal data or information is the users' responsibilities whether to share or not share excessive details on social network. For those respondents who used social accounts for posting and see what others are saying are considered as interactive users where they interact among their peers with mutual interests. While for those who prefer to post information, they are considered as expressing themselves online. For those respondents who see what others are saying are the non-participative type of users and prefer to read people's opinions instead of interacting.
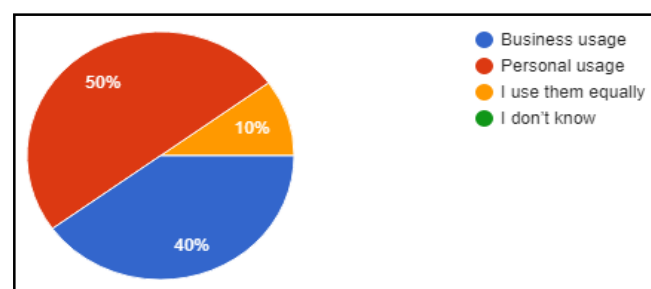

Figure 2. Do you use social media tools primarily for business or personal purposes?

It is undoubtedly that social media is the most powerful tool to advertise products where this platform has larger audience and can covered around the world. Next, social media is also the best platform to gain feedback from consumers regarding the organization's products or services. Using social media to gain feedback eliminate the hassle

to print out survey forms and manually interpret it to spreadsheet to generate report or graphs where social media can be done instantly and can give instant reviews as well.

Figure 2 visualizes the responses with 50% admit into using social media tools exclusively for social necessity, 40% of the respondents use the aforementioned tool for business purposes, and 10% use social media tools for both purposes. Capitalizing the use of social media nowadays has provided users with assortment of purposes to its usefulness. Social media is no more to be used solely for social networking, but expanded to accommodate business processes. According to majority of the respondents have taken advantage of the limitless advantages of social media. Respondents have either used social media for personal or business purposes, or both equally. The results complemented definition of social media, whereby social media provides users with the ability to create profile(s) to cater either personal or public audience (business purposes), offering users with a considerable amount of information towards a specific topic, or a product or service they are providing and possessing the ability to communicate with other users or customers within the network, usually being categorised through a specific set of interests, relating to feedbacks and suggestions on how to improve the product or service. Features that social media tools have provided to business users are readily available to accommodate the demand of a traditional business processes. Facebook, one of the famous social media tools, can be used to ease users from manually searching for the right individual to initiate a business with. Facebook also encourage business users to maintain a good relationship with its external stakeholders, more precisely customers, in order to build a good reputation for the business. Niche marketing through Facebook is more effective since this social media tool allows its users to create an interest group that businesses have accessed to, directly affecting the level of exposure towards the appropriate market segment. Lastly, Facebook also promote business profiles made within its network, by positioning the business page links efficiently so potential customers could access the page easily when searching through a search engine, for example in Google.com. LinkedIn is synonymous with its capability to be used as a reference tool for organization in searching for a potential employee. Employers will benefit greatly when using this website as the collective number of information regarding applicants are made available online. LinkedIn is a social media tools that provide users with features similar to the traditional curriculum vitae or CV when looking for a job, as individuals who have created their profiles in LinkedIn can use the website to look for a job, through a notification "wall", which can be used by employers to advertise their open position.

However, based on the results from the questionnaire and general view, everyone who is involved in today's business are active digital apps user. Moreover, information security from both sectors requires immediate attention. Information security awareness as an employee's knowledge of information security and their consciousness of the organization's information security measures or plans. Widespread dependence upon digital apps system has brought about the shift in interest on working for obvious practical reasons. Information security has become an issue requiring more attention from the various professions attending to the needs of computer using organizations, be these accountants, auditors or business managers. Organizations need to emphasize on the importance of information security awareness and the implementation of such security system into their organization. In addition, it is very important for both organizations to adapt the information security systems in their organizations. Based on our findings, respondents from both private and public sector indicated that they are using biometric system in their organization. This shows that there is the adoption of biometric security devices in organizations to strengthen their systems. The uses of biometric technology will be increasing in the future, where people more concerning and priorities about their security. Although the cost of implementing the system is costly, however, it is highly advisable for security purposes. Five types of security breaches namely system failure or data corruption, infected by viruses or malicious software, theft or fraud involving computers, attack by an unauthorized outsider or the system being hacked and misused of authorization access. Here, security breaches

types mentioned is where an unauthorized individual successfully extracts confidential information for its personal use or bypassing a network with tight security and steal a company's files, and also data corruption means an error while sending the data to another party which cause unintentional changes to the original data. Theft or fraud means a person impersonate or stealing personal information of a victim. These acts are seen as offensive as these people can misused the data.

Standard procedure taken by respective organization for their information security system. There are five procedures namely, firewall, anti-virus, formal written document security policy documented, implementation of AAA (Authentication, Authorization and Accounting) for all users and providing account and password. Firewall can be implemented using hardware or software. Firewall means to retain the security of a private network, it blocks unauthorized access from unauthorized users who is trying to gain access to private network. Firewall can be done through packet filtering, security gateway and proxy servers. While anti-virus is a software which helps to protect a computer from viruses, spyware and other types of malwares. Documented security policy is a formal policy for employees to obey as to not breach the agreement. AAA means a system to control the access to the computer, and able to audit the users of the computer and also provide certain information to selected individuals who are eligible to access. Setting up account and password is the most common standard applied to most organizations where each employee is provided with their own username and passwords. The used of virtual private network (VPN) as remote servers in organizations. Virtual private network means a technology that a network which allows safe and encrypted connection for users to support more secure network than less secure such as Internet. VPN brings two main benefits namely cost savings and network scalability. However, ISO (*International Organization Standard*) Standard is most acceptable guidelines for adopted by the organization. This protects the security of information from threats of a company and this standard provides the best business practices and guidelines as well as principles for implementing and managing the information security of an organization. Based on the illustration above, it is clear that both government and private sectors adopted the ISO standard rather than the other two standards implemented in the world.

5. Discussion

5.1. Ability to Gain Accurate Understanding of Customers' Needs

Social media enables these organizations to recognize their prospective customers' viewpoint and also coordinate with them. On social media platforms, organizations can easily engage with customers through social media groups, chats, direct messages and comments section. The organizations are exposed to a wide range of information on social media which includes information about customers and current happenings. Further holds that these information are used to track and analyse what the customers are saying in regards to their business or items on social media. This includes feedback, complaints and suggestions from the customers. As mentioned in the literature review, these information are regarded as recommendations and guidance to the organizations.

Consequently, amendments and improvements can be made to their products and services which will ultimately result in customer satisfaction. Moreover, the organizations are able to ask for input from the customers on social media platforms and respond to questions and complaints. They can utilize this information to provide their customers with the best service (Figure 3). In addition, social media platforms enable these organizations to react to their customers' inquiries and complaints promptly.
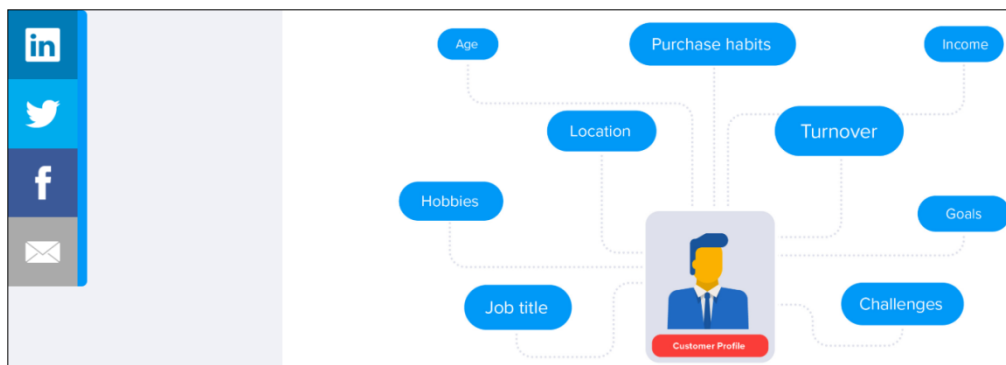
Figure 3. Needs and behaviours based-on customer profiling.

5.2. Opportunity to Reduce Business Costs

Market research can be an exorbitant and time-consuming process, but these organizations have switched to social media as an economical and extensive tool for obtaining insights into their market, customers, branding and other crucial market research factors. These organizations utilize social media platforms such as Facebook, Twitter and Instagram to track trends and carry out market research. By just looking through the most recent posts and popular terms by their customers, they can easily get insight into arising trends and discern what the customers are discussing about their business in real-time. Social media platforms also enable the organizations to participate in an open discussion with their target customers. This technique for research provides the organizations with significant data and a more profound understanding into their customers' thoughts and preferences. In other words, it enables the organizations to recognize the actual desires of their target customers. In comparison with traditional market research, the cost of conducting market research on social media platforms is considerably less and it is also less time consuming.

Carrying out market research on social media platforms can enhance the effectiveness of the organizations' marketing strategies as they are more knowledgeable about their target market. The information that has been accumulated from the market research are utilized as a guide for their marketing strategies including product launching and follow-up marketing. In accordance with an interview conducted, it was mentioned that after conducting market research on social media platforms, they found that their customers prefer advertisements through social media as opposed to traditional advertisements. The utilization of social media for market research is more effective rather than investing time and money into building a marketing plan where the outcome is uncertain. This prevents wastage of money and efforts which will overall reduce business costs.

5.3. A More Effective Marketing Platform in Time of COVID-19 Pandemic

These organizations utilize various advertising features that are offered by social media platforms to market their products and services. Marketing on social media does not demand a large amount of monetary resources in comparison to traditional marketing for example television or billboard. The organizations only need to have computers or phones and an internet connection which can be used for a long period of time [18,21,29]. This will help reduce their marketing costs significantly in the long term. The marketing on social media results to an increase in brand recognition because it allows organizations to constantly communicate with their customers which boosts their credibility. The familiarization of customers to their brands results in an increased brand reach as they are more inclined to recommend the business to other people. The ease of marketing on social media is one of the reasons why these organizations are favourable towards it as they are able to advertise their products quickly by simply posting photos and videos. Furthermore, the social media marketing not only helps reach local customers but also millions of customers worldwide which is why these organizations utilize it. In addition, the use of social media

influencers is one of the most effective ways to market their products and services in Indonesia. Moreover, Social media influencers are social media users who have a significant amount of following that have the ability to persuade customers into buying a product or service due to their credibility in a specific industry. The utilization of social influencers has significantly boosted their sales and also minimize costs as it is cheaper compared to other types of marketing. Overall, using social media for marketing is an effective tool to reduce the organizations' operational costs.

However, Competitive advantage refers to an attribute or quality that gives an organization an edge over its competitors. Competitive advantage helps an organization to compete in the market more effectively. In accordance with the survey conducted with the organizations selected, majority of them agree that using social media tools to interact with their customers and potential customers are more likely to have a significant competitive advantage over those that do not. Moreover, social media platforms can help an organization attract high-calibre individuals in competitive markets. Organizations are able to increase their exposure and recruit quality staff by creating a positive portrayal of their business on social media platforms, encouraging their current employees to recommend their business as well as connecting with professional organizations. High-quality individuals are regarded as a treasure because they learn quicker and are able to carry out the work more effectively and efficiently compared to low-quality individuals. As a result, they contribute to the overall productivity of the organization. In addition, the utilization of social media platforms can result to an organization being seen as an expert in their field, believes that blogging is one of the most effective social media platforms to achieve an "expert reputation". By posting information that is not related to marketing on a business blog regularly, it delivers value to the customers and helps an organization strengthen their reputation as an expert and ultimately setting them apart from their competitors. Finally, these organizations observe their customers' social media conversations to have a better understanding of their preferences and needs which result in retaining a high number of customers and obtaining new ones whose needs are unmet by their competitors.

After analysing all the results from the organizations respondents, we can conclude that social media is very important to both private and government organization. This is because of the benefits organizations can obtain by utilizing social media platforms. One of them is that it can increase the effectiveness of advertising by designating a few employees to communicate with thousands of customers with relatively little effort. For example, they use website to advertise their services and is considered as a powerful tool as it is cost efficient and the wide range of audience is limitless as long as they have access to the internet. In addition, the internet is also becoming a trend so people will eventually refer to social media and see the products and services beforehand. Furthermore, social media is important with regards to engaging with customers. Social media offers many platforms and ways to approach customers and encourages customers to send their feedback in the form of complaints, approval and even helpful suggestions (Figure 4). In today's world, digital ecosystem presents to support the operational processes and procedure of organisations. Hence, their presence to some extent supports the goals and objective of the firms and an investment in informational technology need to be consistently anticipated in order to enhance the means of work of system. The commercialization of information systems in private and public organizations is no longer aim at providing more accessibility to the intended information but rather conserving scarce human capability, focusing on the information that is becoming more central and relevant to the operations and decisions that have to be completed. The workforces to some extent need to trained and become more proficient as users in order to acquire new technological skills as well as constantly learning the importance of utilisation of information system as educational tools.
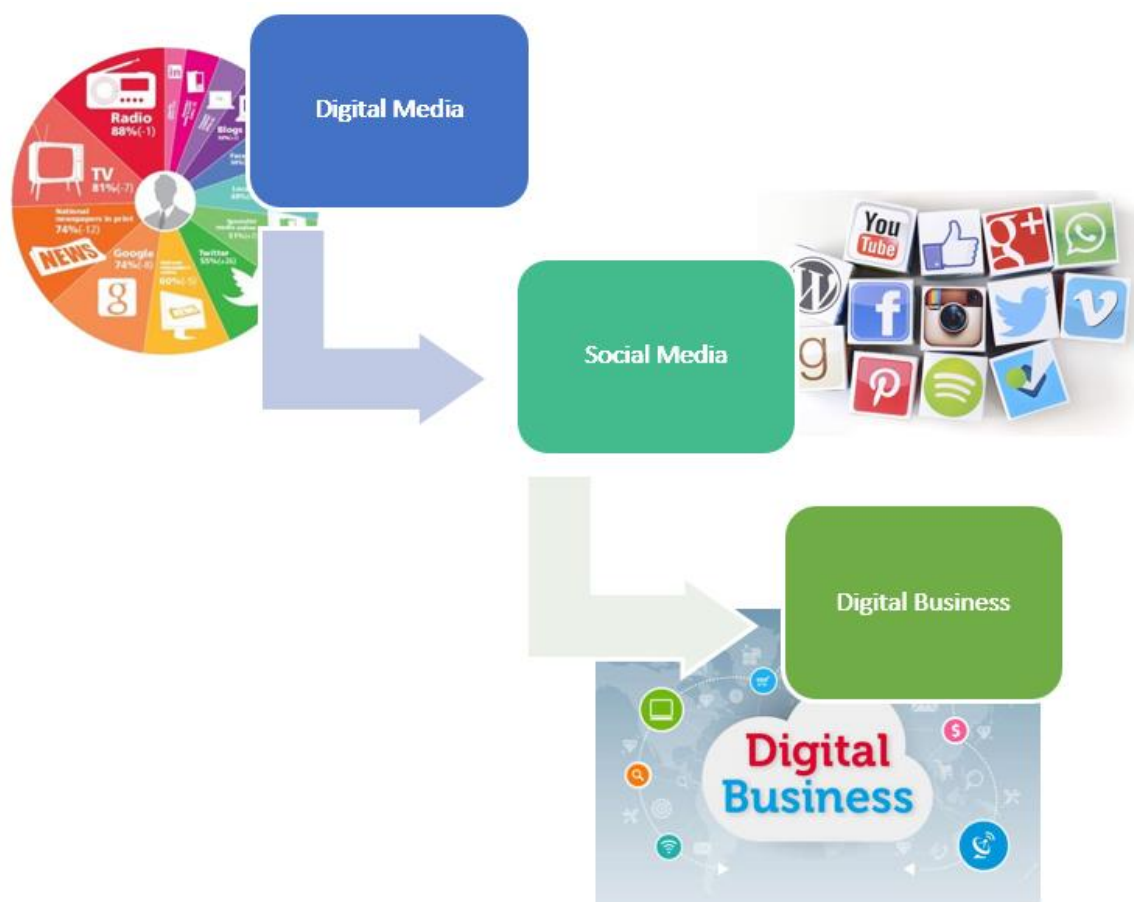
Figure 4. Digital Applications Transformation to Digital Ecosystems.

5.4. Transition from Social Use to Business: COVID-19 Pandemic Perspectives

Encouraging the use of social media tools for business has been proven to be difficult, especially businesses that have experienced success without using social media tools as a business information system. There is an apparent threat of businesses falling behind when social media tools are not integrated. The Bruneian market is becoming increasingly demanding for organizations to not acknowledge the benefits of social media tools for their respective businesses.

5.5. Educate on the Importance of Social Media Tools as Digital Business Driver

It is essential for organization, particularly small-to-medium enterprises (SME), to realise the importance and benefits toward integrating social media tools into their business processes. Social media tools can aid a number of processes and operations in such that it offers more when compared to traditional mean of conducting those aforementioned processes. Departments within an organization, particularly sales and marketing department, has been benefiting from the application of social media tools. Especially in terms of customers' coverage and identifying trends, social media tools have provided an abundance of information for businesses to take advantage of and align their marketing strategies to this information to increase effectiveness and efficiency, as well as reducing unnecessary cost being incurred.

5.6. Improve Monitoring of Social Media Usage within Organization

Organizations that are using social media tools as part of their mediums to ease business processes need to also monitor constantly the activities that their stakeholders are executing to prevent damages to the business' reputation. Reputation relates to the

organization intangible asset that are of value financially, and can be used to attract more customers, improve the productivity of workers, generate investment interest from potential investors and gain positive reviews or perception from media which can be negatively affected by three angles within social media namely (1) customer angle, (2) employee angle, and (3) corporate angle. Due to the ability for businesses to cater customers through only social media, risks concerning the impact of customers' reviews and negative comments are impending rapidly. *Consumers* nowadays have the utmost ability to confront any organizations especially concerning their social, commercial and ethical responsibilities. They also relate business confrontation to issues such as product defects, dissatisfaction of customers and business practice misconducts, and anonymity of users within the social media networks to post information and content about the organization without worrying about the consequences. The *employee's angle* of risk in using social media can have enormous impact towards the organization reputation, especially in terms of the credibility and accuracy of any comments made about the organization. Here, behaviours of employees when using social networks have a major impact in the perception of stakeholders towards the organization, regardless the intention of the employees. Employees who show or suggest dissatisfaction towards an organization can negatively impact potential new employees to work under the organization, this may result in the organization repelling employees of excellent skills and qualification that could have been proven beneficial for the organization as a whole. Lastly, concerning the *corporate* behaviours will inevitably have either a positive or negative consequence for its stakeholders. It is vital for organization to maintain good behaviour when using social network, partly due to the speed of which information can be disseminated throughout the network. Integration of social media tools into the organization needs to be carefully planned and implemented. There is a habit for organization to integrate social media as it is without properly complementing the usage with the strategy of the organization. This will be more likely to affect the reputation of the organization negatively.

However, organizations planning to implement the use of social media tools for its business operation needs to analyse the different types of social media tools and identify what version of media(s) each social media platforms displaying. Organizations can also adopt a corporate response strategy which aim to prevent of eliminate reputation damages possibly made by the three angles mentioned previously. The need for organization to properly plan its corporate response strategies to avoid more complication in handling damages, such as training and empowerment of employees to prevent damages from customer angle, extensive education and understanding of employees' roles for risk affiliating with employee angle, and partnering up with experts in the field of social media marketing to prevent damages from corporate angle.

Moreover, this study also recommends both organizations sectors investing in Business Intelligence. Business Intelligence (BI) refers to technologies, applications and practices for the collection, integration, analysis and presentation of business information. The purpose of BI is to support better decision making. Adoption of Business Intelligence system can push efficiency on the daily operations as well as to further grow their organization. Government sector may utilize BI to find out which area in the department that can create employment and digital start-up business opportunities to Indonesian. As for private organizations, BI can help them to create structured ways to grow revenue, improve efficiency of their business operations and including improve on ways to measure KPI (*key performance indicators*) of staffs (Figure 5).
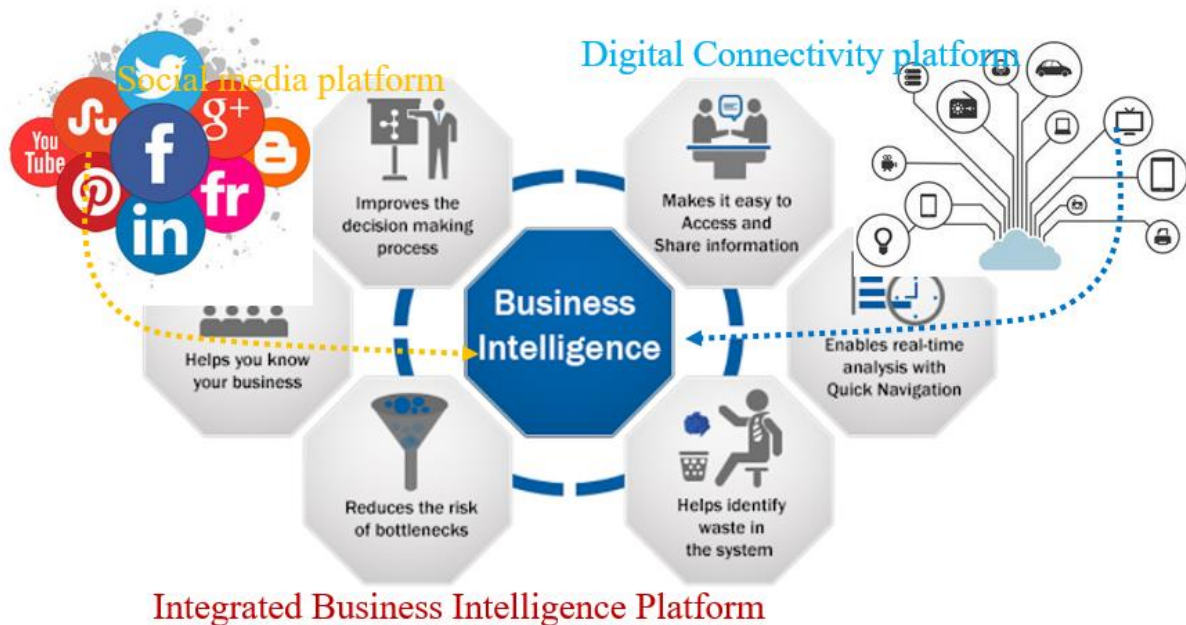
Figure 5. BI for Transforming Business to Digital Ecosystems.

During the pandemic period, through social media, the organization could attract more customers as they able to increase their brand awareness as well as customer's loyalty. The presence of the organization is more valuable with the help of social media. Here, social media marketing considered as the most commonly means that being used to promote their products or services, hence, the organization could gain more benefit as they receive greater attention from the public which provide more awareness and indirectly could increase brand loyalty. This also has been proved that social media marketing is an effective medium in improving brand awareness and loyalties to improve the organization performance and productivity. With the use of social media, businesses are able to strengthen their brand experience where it appeals to the customers giving a good reputation and also could reinforce the brand name repeatedly. It could cater real-time information to those in need. In today's world, customers are more powerful in terms of helping the success of an organization, thus, it is important for every organization to be reachable in their social media communication.

Moreover, social media could boost the business website traffic as it is the fastest and easiest means of linking back to the business website page. The views of the organization's website will increase as social media help in linking the public to their website. Therefore, when lots of people visiting the organization social media, it indirectly helps in increasing the search ranking of the organization. The impact of having greater search engines ranking helps the organization greatly as their performance result has drastically affected in a positive way. In his further studies also stated that through the rapid use of social media, an organization could keep up with the current trends and able to analyse their competitors more in the market. Social media has power to not only control the business, but also to influence the social communities in order for the benefit of the organization's performance, reputation and profit. They also stated that social media is a powerful medium in monitoring competitors' position in the market as well as to analyse what they have at the moment.

Nowadays, social media is considered as "mega trends" in helping the organization's performance as it provides greater degree of competitiveness between the organization and its competitors. In this technology-driven world, by having a strategic information system such as social media allows the organization to communicate the right message with the right target market. Focusing on a specific target market or also known as "geotargeting" is an effective tool to improve business performance where when an organization know their

target audience, they able to convey their messages well, therefore, this could increase the productivity of the organization. When customers understand what the business is actually selling, and they feel that it is applicable to them, it will increase their trust and thus it leads to loyalty. Customers is one of the major factors that help in the growing of the business and the success of the organization, hence, by having a social media platform as one of the business tools to interact with customers will provide the business with the idea of what to sell to the market. Furthermore, when the organization able to reach their specific target market, the chance of having greater profit is high this is because they produce based on what the customers want, they follow up with customer's preference which can satisfy them more. Therefore, this leads to a better performance and when the organization is being efficient and effective, it will increase their productivity.

5.7. Social Media Security Issues in Time Pandemic

The increased use of the information technology in business has brought new challenges when it comes to the security of information. Organizations must therefore secure their servers and technologies from external and internal threats. There are various strategies that companies can safeguard their information and data. One of the strategies used is the use of password to log in to the company's portal where each of the persons authorized to access the portal is provided with a password that is unique and only known to him or her. In the event that a person's password is used to perform illegal activities, it is then easy to locate the person responsible for the act. Hacking is also another security challenge that company's face with regard to the security of their systems. This can be eliminated if the most updated anti-virus is installed in the system. Cyber security is a global problem and thus every organization should take measures to ensure that it safeguards itself from cyber-attack. The safety of the customers' data depends on the security measures adopted by a company. The level of the customer loyalty depends on the ability of a company to safeguard some of the most sensitive information. Some of these details may include the customer's name and credit card information. It is also important for a company to adhere to the international standard that regulates the use of information technology and systems. These standards are meant to protect the owner as well as the customer. These regulations provide guidance in areas of privacy and security. Based on the results, everyone who is involved in today's business (both government and private sectors) are active information system users. However, based on our findings, information system security from both sectors requires immediate attention. Here, information security awareness as an employee's knowledge of information security and their consciousness of the organization's information security measures or plans. Widespread dependence upon computer system has brought about the shift in interest on working for obvious practical reasons. Information security has become an issue requiring more attention from the various professions attending to the needs of computer using organizations, be these accountants, auditors or business managers. Organizations need to emphasize on the importance of information security awareness and the implementation of such security system into their organization. In addition, it is very important for both organization to adapt the information security systems in their organizations.

6. Conclusions

In conclusion, there are many uses of social media in time of COVID-19 pandemic for boosting business start-ups, which have been addressed in this study. Social media connects people across the globe where they are able to keep in contact and share their experiences. This is made possible by digital ecosystem. The various social media platforms have different features that are available for use by the subscribers. Social media has also made it easier for people to do business. This is mainly due to the fact that it opens up the global market and it is also cheaper to advertise. The government as well as the private sector has been in the forefront when it comes to the use of social media. This is evident from the three government sectors that have been addressed in the study. This enables these departments

to offer the government services more conveniently where they are able to inform the public on any development or news about the department. It also provides them with factual information regarding its operations from the feedback given by the people via the social media. Maintaining a good online presence is one of the key aspects that determine the success of companies in the private sector. This is mainly due to the fact that most customers usually rely on the customers review in determining the ability of the company to meet the needs of the clients. This is the main reason why most organisations set up a customer relations department section that is mainly mandated with the responsibility of responding to the customers' feedback on the various online platforms. It is thus important that a company is able to understand some of the underlying technologies that facilitate the use and operations of social media. The social media company makes use of the information system to operate. This enables it to keep and represent people data and also keep a record of the activities that the members engage in. the digital ecosystem plays a vital role in assisting a business or organization to manage its employees, stock, records and customers with ease. It makes use of hardware and software to collect and store data and then process these data which assists in the decision-making process.

In other hand, during the intensively engagement of social media usability during COVID-19 pandemic, the highest number of system breaches was as a result of failure and corruption since most of the organizations have strong firewalls, antivirus and also makes use of password to access their databases. This means that the most effective cyber-attacks mainly originates from within the organization. It is thus important that the organization is able to train its employees on means of safeguarding the information available on the databases. This is the only way that the organization can be able to limit the accessibility of some of the vital information to unauthorized personnel.

7. Recommendation

The survey has brought into light some of the challenges that businesses face when it comes to the use of social media in their businesses. Some of these challenges can be solved internally which some requires the collaboration of the social media regulatory agencies. The companies that develop these systems can also play a role in ensuring that the seal some of the loopholes that have been exposed from this research. Below are some of the recommendations that can be implemented in order to make sure that some of the challenges addressed in this paper are addressed.

7.1. Creating Awareness on Social Media Usage

Social media are as good as the people who are operating of them. It is thus the role of the organization to ensure that the employees are well trained on how to operate the social media in order to eliminate some of the challenges such as security breach and misuse of the technologies. The organization should instil good values in the organization as the integrity of the information stored in their organization databases is dependent on the employees. Those who are found involved in fraud should be punished so that others who may be tempted to engage in such activities may can fear. It is important that a company is able to regularly train its employees on the use of the technology. The employees should be able to safeguard the password given to them and make sure that it is not known to any other person. This is mainly due to the fact that most of the attacks that have been carried out in organizations are usually done using another person's password. The employees should be able to understand that they are responsible for any transaction that is done on the system using their password.

7.2. Restrict the Use of Social Media Platform during Work Time

It is clear from the result of the survey that social media is mainly used personal rather than business purposes. The organization should be able to monitor the usage of social media by the employees since it is addictive. Organizations count losses due to the time that the employees spend chatting and accessing their social media accounts. It is thus

important that an organization is able to set up a department that is mainly responsible for building its online image. The rest of the workforce should not be allowed to misuse social media by spending valuable working time on social media. The use of social media to market the business should be encouraged as the ability of a business or any organization to respond to the concern of the online users determines its reputation.

7.3. Use of Layered Security in the Social Media

In order for an organization to be able to maintain the integrity of the data stored in its system, it is important that the number of people accessing these systems is limited. This can be done by using layered security system where different employees have different level of authorization. The most sensitive information such as credit card numbers should only be accessed by a few top-level management personnel. This will make it easier for any attempt to access the system illegally to be detected before damage has been done. The main three aspects of layered security includes prevention, detection and response. These are the most important factors that make layered security the most effective method of data protection in an organization.

7.4. Adoption of Effective Social Media Marketing Campaign

The ability of the company to market itself determines its reputation and acceptability among the customers. It is thus important that companies are able to inform their customers some of the benefits that they will reap by working with it. This includes assuring the customers that their details are safeguarded and also responding promptly to any issue that the customers may bring up. Most of the customers now are after speedy services and thus it is recommendable for an organization to install the most updated software in its operations so that it is able to offer speedy services.

8. Limitation

Despite the awareness of social media has been increasing drastically with the ever-changing technology, particularly within COVID-19 pandemic, still the limitations to investigate the matter are quite significant. During the investigation, the authors faced about few obstacles to finish the study:

1. Validity: although different organisations are being chosen to participate in the survey, a few organisations did not actually reply back and, therefore, the authors are left with a limited number of organisations, which can cause bias. This can affect the whole result and findings of the topic of study.
2. Time: the organisations that we send the survey to also need time to decide whether they want to participate in the study or not. Hence, the authors are limited to only written research when the accuracy and reliability of the data can be increase if interview can be done by few of the company's' personnel. Despite these limitations, authors are able to gather the amount of data in order to ensure that the results are reliable in making the hypothesis of the study true.

Conflicts of Interest: The authors declare no conflict of interest.

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