

Web 3.0 Digital Marketing in US Business Startups: A Literature Review

Bisola Aladenika^{1*} Abosede Hinmikaiye^{2*} Effiong Samuel Edet^{3*}

1. School of Business, Westcliff University, Irvine, CA 92614

2. School of Business, Westcliff University, Irvine, CA 92614

* E-mail of the corresponding author: b.aladenika.169@westcliff.edu

Abstract

The study has adequately and thoroughly looked at the impact of web 3 digital marketing on startup businesses in United States as well as the history and evolution of web marketing. The study employed a case study research design to select the area of study. The secondary source of data that was analyzed revealed that web 3 digital marketing has had a significant impact on the overall performance of startup businesses in the United States. This is captured in the consistent increase in the profit of Flowcarbon, which grew from USD 150 million dollars in 2017 to USD 302 million dollars from 2017 to 2019. This shows approximately 50 percent increase in the company's profit. The study also explored the sales trend of Bravado company. It was observed that the company's sales have increased since 2017 till 2022. Based on the study's analysis, the study concludes that web 3 digital marketing has overtime been a tonic for the success and growth of startup businesses in the United States and the world at large. Among other requisite recommendations, based on the conclusion of the study, it was recommended that businesses incorporate web 3 digital marketing strategies as this has become a prerequisite for accelerated business growth.

Keywords: digital marketing, business start-ups, web 3.0.

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1. Introduction

Since the advent of web 3.0 digital marketing, businesses all over the world, including startups, have benefited from embracing web 3.0 digital marketing to gain a significant market share and boost their cash flow over time (Almeida and Oliveira, 2011; Fuchs et al., 2010 and Kotler, 2009). Because the web's efficiency has improved, there has been a growth in the number of use cases and, as a result, the number of users. The introduction of web 3.0 has boosted the odds of organizations, particularly startups, succeeding. According to Hawkins (2001), web 3.0 digital marketing encompasses more than just websites and SEO (SEO). It has revolutionized how businesses and other internet users view and think about the internet throughout time. According to Rappa (2004), web 3.0 digital marketing focuses on trends and emerging technologies that, if properly studied and used by businesses around the world, can help them achieve their goals and objectives. Web 3.0 digital marketing, unlike web 1.0 and web 2.0, is an improved version, according to Laudon and Traver (2009) and Verizon (2010).

According to other research (Knapp, 2012 and Blecker et al., 2004), firms, particularly startups, should have a basic understanding of cryptocurrencies and blockchain in order to succeed with web 3.0 digital marketing. To put it another way, firms must be strategic in their digital marketing with the use of web 3.0 to be successful and competitive in the market. To do so, they must have a thorough understanding of cryptocurrency and blockchains. Blockchain technology followed in the wake of John Markoff's 2006 introduction of web 3.0 digital marketing. Blockchain technology is a public, well-kept transaction that is distinct from any other transaction (Cena, et al., 2009). These transactions are available to any internet user who is interested in them, and they are kept across multiple computers in a network (Amit and Zott, 2001). Web 3.0, unlike web 1.0 and web 2.0, is less vulnerable to hacking. As a result, it has proven advantageous for businesses, allowing them to conduct critical transactions that are less vulnerable to hacking and online theft.

Customers now have the freedom to choose when and where they wish to be advertised to, thanks to the launch of web 3.0. Customers will look at online advertising in this regard, and businesses will need to provide value in the form of tokens or content to get their products in front of their target audience (Brinker, 2011; Garca and Aguado, 2011). Web 3.0 digital marketing, according to Chung et al. (2004), has enhanced the propensity of firms, particularly US startups, to develop, thrive, and remain competitive in the market. According to Wall (2012),

startup enterprises in the United States have been able to raise their profit at a geometric pace since 2006, following the implementation of web 3.0, rather than an arithmetic rate in the age of web 1.0 and web 2.0. As a result, the purpose of this research is to investigate the potential influence of web 3.0 digital marketing on startup enterprises in the United States.

2. Objectives of the Study

The study seeks to achieve the following objectives

- To trace the history and evolution of web marketing
- To examine the impact of web 3.0 digital marketing startup businesses in the United States

3. Literature Review

Conceptual Literature

Various scholars have put effort to conceptualize the web 3 technology of digital marketing and its corresponding impact on startups and existing businesses. Although there is no precise, comprehensive and generally accepted definition of the web 3 technology, it has been defined by Silva et al. (2008) as the third generation of the internet which allows the users to have a better experience and gives them access to a more intelligent web. Naik and Shivalingaiah (2008) pointed out to the fact that unlike the web 2 technology and other early days internet which mainly were based on information from static websites with little or no room for interaction with the user(s), the web 3 is interested in the involvement of the user(s); incorporating data generated by users to enhance and improve the online ecosystem while creating opportunities for interactions among users of the platform. Sabbagh et al. (2011) points out that the ability of web 3 to ensure a collaborative environment among users of the platform gave it the name 'the web of value'.

In the words of Kobie (2011), web 3 marketing utilizes the internet by looking at trends and new technologies while improving the experience of the marketers by creating rich and interactive advertising opportunities making it possible for them to deliver more targeted advertisements to consumers. In the words of Geoffrion and Krishnan (2003), with web 3, marketers will be able to provide a more efficient strategy and advertise their products. Owing to the fact that web 3 is user-cooperative, Osterwalder and Pigneur (2010) pointed out that it is built on blockchains using existing infrastructure with the goal of making the internet more accessible and secure for users, giving consumers the opportunity to own and operate tech platforms by themselves instead of sacrificing their data by relying on big tech companies. As regards to digital marketing, Krishnan et al. (2007) noted that web 3 will not only incorporate users as a way of impacting marketers, it will also ensure limited access to user data, more reliance on content creators, and a more community-focused approach. As per Bamidele-Sadiq and Popoola (2022), digital marketing, direct marketing and advertising will continue to impact consumers' psychology.

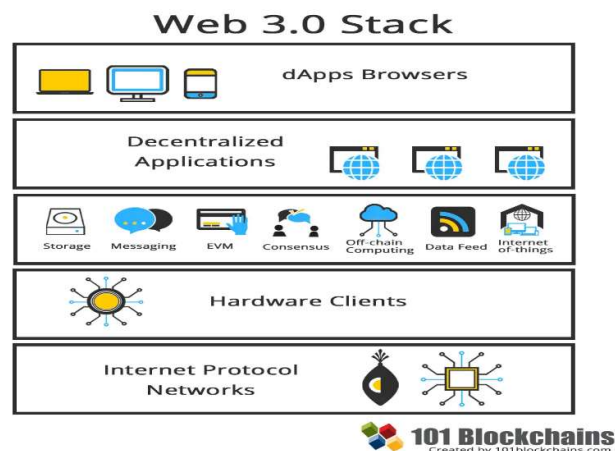


Figure 1. How web 3 works in businesses

Source: Researcher's Computation

The diagram above gives a short description of how web 3 works according to Santos (2006). He points out to the fact that web 3 does not rule out the traditional technology but improves on them. The businesses only need to transform their technologies and adopt blockchain and related technologies such as artificial intelligence, big data and so on. He mainly used the decentralized applications (dApps). The dApps will be divided into various categories which will replace the traditional services and applications and can be used to create decentralized organizations' business models as well. Hence, a deep understanding of what web 3 is all about requires a deep understanding of dApps. The different categories of the dApps include: Social networks, Exchange Services, Messaging, Storage, Insurance and Banking, Streaming, Remote jobs and Browser as shown in the figure above:

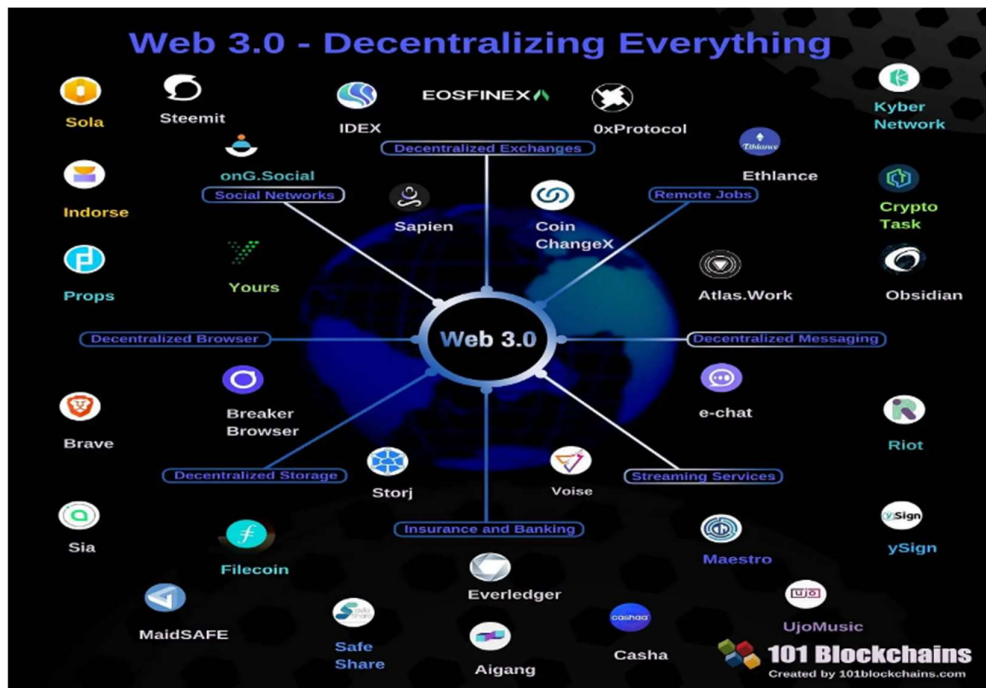


Figure 2. Social Network Examples
 Source: Researcher's Computation

Among all other instruments of the web 3 technology, the social network has proven to play a very crucial and prominent role in businesses across the world (Laudon and Traver, 2009). Despite the limitations of the workability of social network, its major advantage lies in the fact that anyone can be a part of it irrespective of their geographical limitations with the use of blockchains (Rappa (2004). In addition, these social networks have proven to be safe as they have full authority over the data that is shared and stored on the platform. These according to Almeida and Oliveira (2011) are associated with the web 3 social networks such as Sapien, Steemit, Sola, Indorse, onG. Social, PROPS Project, Yours, and so on which will all utilize blockchain and next generation technologies such as artificial intelligence. Some of these social network web 3 applications are listed in the diagram below:

Empirical Literature

There has been enormous research on the impact of web 3.0 digital marketing on startup businesses in the United States. Researchers (Fuchs et al., 2010; Osterwalder and Pigneur, 2010 and García and Aguado, 2011) carried out an empirical study on the impact of web 3 digital marketing on startup businesses. Their study employed a case study research design in order to get a specific population, and it dependent on a primary source of data. In the course of their research, they used United States as a case study, with startup businesses. Based on their findings, they concluded that web 3 digital marketing has overtime brought about aggrandizement in the startup businesses in United States. The result of their findings is in alignment to that of Kotler (2009) whose study was based on web 3 digital marketing in UK business startups.

Wall (2012), Sabbagh et al. (2011) and Laudon and Traver (2009) also carried out a study on blockchain in digital marketing. They used a primary source to gather data to facilitate the study's objective. Their study employed case study research design and used US startup businesses as a case study. Their study used 5-point Likert scale of measurement [strongly agree (1), agree (2), moderate (3), strongly disagree (4), disagree (5)]. Based on the conclusions from the questionnaires' analysis, it was observed that majority of the respondent chose the strongly agree option and concluded that blockchain has a very strong impact on digital marketing. To test the null hypothesis of the study which stated that blockchain does not impact digital marketing in US startups, the study employed the binomial logit and probit model. Based on the findings of the study, it was concluded that blockchain has a significant and positive impact on digital marketing.

In another study carried out by Cena et al. (2009), Brinker (2011) and Knapp (2012) on the role of web 3 digital marketing on businesses, the researchers reviewed 16 literatures on web 3 digital marketing and business performance and concluded that web 3 is not an opportunity to improve existing and long-standing businesses but has also become an opportunity to create new businesses. They also reached a consensus that with the web 3, trust and privacy reach a greater role enabling the identity management to ensure the authenticity and the user education promoting good practices of the internet use and may be growing business areas.

Similarly, Almeida and Oliveira (2011) explained in his study that through web 3 digital marketing, online shopping has created its popularity among the consumers particularly in business to consumer model (B2C). The author recommended that for meeting and satisfying the needs of the shoppers, the retailers ought to draw in and persuade the purchasers so they can be the customers in the on the web climate. To accomplish this objective on a recurrent premise, it is expected to comprehend and fathom the purchasing conduct of the shoppers. His study examined the influence of web 3 digital marketing on the consumers' behavior in US. Particularly, consumers that patronizes startup businesses in the United States. Stratified sampling method was used to extract the sample size. The primary data collection was adopted for this study, and the data collect was non-parametric, the data analysis was performed using chi-square test at 5 percent level of significance.

Methodology

Research Design

The research design alludes to the general procedure that you decide to coordinate the various parts of the study in a sound and sensible manner, in this way, guaranteeing you will really address the exploration issue; it comprises the outline for the assortment, estimation, and examination of information (Azungah, 2018). In other words, research design as explained by Trochim and Arora, 2015) is the framework of a method used in research and a technique that is chosen by the researcher. Research design is also referred to as the aggregate strategy that is employed by the researcher to tackle established research questions through the collection, interpretation, analysis as well as the discussion of data (Sam and Sam, 2011). The various types of research design include case study research design, historical research design, observational research design, econometric research design, among others (Hyett et al., 2014). This analysis will use the case study research design as it will look at a single area, United States. The study will look at web 3.0 digital marketing in US business startups. In the words of Armat et al. (2018), the case study research design is focused on the gross examination of a specific event or group.

Research Approach

Research approach as opined by Choy (2014) is viewed as the process that aids researchers on data collection as well as their analysis during their study. Yin (2014) explained that there are basically three research approaches to pick from: Quantitative, qualitative, or mixed research approach. Qualitative approach allows the researcher to gather non-numeric data for qualitative analysis. Quantitative approach is a direct opposite of the qualitative approach which requires the application of quantitative methodologies to numerical data analysis (Apuke, 2017).

To look at the impact of web 3.0 digital marketing on US business startups, both quantitative analyses were used. Graphic drawings were employed to aid the quantitative approach.

Method of Data collection

The study depended on a primary source of data for the study's analysis. Data were sourced from academic articles such as journals, online sources, internal records, government publications, newspapers, among other sources.

Evolution of Web Marketing

Since the 1990s, the internet has gone through stages of evolution and has proven to be quite valuable in enterprises of all sizes, whether small, large, national, or worldwide. Miranda and her colleagues (2014). This progression is based on new adjustments and countless improvements in their structure and nature, as well as their contributions to Saraf and Sabadra's enterprises (2018). Businesses, as stated by Balzarova and Cohen (2020), were first focused on traditional marketing techniques and subsequently progressed from 'brand equity' to 'customer capital' and finally to 'business capital.' Indeed, Pandit (2010) and Trastour et al. (2002) marketing mix describes the actions and processes connected to product management and marketing. At this point, marketing is purely tactical, proposing a customer offer as a combination of product creation, pricing, promotion, and placement (the 4Ps) (Verizon, 2010). However, marketing evolved from a tactical to a strategic approach, introducing the tools of modern marketing. This was made possible, of course, by globalization and the advancement of information technology via the internet, which made it simple and affordable to share information between marketers and consumers. Since the internet's beginnings, however, evolution and change have continued unabated. Web developers have ensured that all hands are on deck to improve and enhance the internet at every opportunity and with every piece of information available. In other words, various online tactics and elements have evolved with improvements over previous ones, enhancing the marketing strategies of firms all over the world; they are categorized as web 1, web 2, and web 3 technology.

Web 1 Marketing

According to Silva et al. (2008), the web 1, also known as the first generation of the World Wide Web, was only used to deliver material. In other words, the web enabled users to find and access information. Users had little or no ability to interact with the content or contribute to it. They were distinguished by read-only content, an online presence, static web pages, and the usage of the Hypertext Markup Language (HTML) (Wall, 2012). Its technologies include HTML, HTTP, and URI, which are all key web protocols.

According to Laudon and Traver (2009), the web 1 is also associated with the first marketing approach known as marketing 1.0, which emerged as a product of production development during a new industrial revolution, following the burst of the internet bubbles, during the invention of new information technologies and communication. The primary idea is to offer items and services from businesses that are not online. According to Rappa (2004), the user's role is to browse business websites by clicking on hyperlinks, which is connected with unidirectional communication. To put it another way, marketers are tasked with ensuring that their contents (products and services) are presented online without having to worry about delighting their customers or having a target audience for their advertisements. The product was at the center of marketing, allowing for vertical content distribution in ways including sending messages to online customers, using static ads, exchanging links across partner sites, and sending newsletters (Santos, 2006). In this instance, the company's major goal is to simply develop their items and make them available, as product availability secures product selling. It is based on segmentation, marketing mix elements, and one-way contact with people, according to Naik and Shivalingaiah (2008), and uses unidirectional traditional media such as mail, television, and radio commercials.

Web 2 Marketing

Web 2 is the second generation of web and is described as a read-write web (Santos, 2006). It is worthy to note that the technologies of web 2 gives room for the assembling and management of large global crowds with common interest in social interactions (Osterwalder and Pigneur, 2010). Web 2 is also known as Community web era and started in 2004 by Tim O'Reilly in 2004. In contrast to web 1, web 2 ensures more interactivity and more conversational framework.

The web 2 played a vital role in integrating consumers at all levels of marketing approach and considers them as an active player in the marketing process and not a single receiver (Brinker, 2011). Tools were developed to accommodate these changes and ensure that consumers interact in order to enhance the management of the relationship with existing customers. These tools ensured that marketing moved away from traditional marketing to a new approach that could be characterized as 'marketing facilitator' (Fuchs et al., 2010). Such approach encourages sharing knowledge with customers and between customers hence, making consumers active participants in the development of the products and hence, the improvement of the products when necessary. They can even take part in the creation and distribution of marketing messages and content (Almeida and Oliveira, 2011). Blogs, forums, social networks (Facebook, Twitter), online citizen media, and other web 2 technologies were

employed to facilitate this connection. As a result, it is not an exaggeration to state that during the web 2 marketing age, the consumer(s) became king (Blecker et al., 2004). The primary change from traditional marketing owing to the introduction of the web 2 is the transition from an action strategy to an interaction strategy, as well as the decentralization of value creation on a network of sites, according to Geoffrion and Krishnan (2003). However, technology still evolved and was replaced by the web 3 technology based on user participation (Hawkins, 2001; Knapp, 2012 and Rappa, 2004).

Web 3 Marketing

Based on research, Tim Berners is the "Father of the Web" and a staunch supporter of Web 3. (Kobie, 2011 and Hyett et al., 2014). According to him, Web 3 would be able to read and comprehend content. The idea of the Semantic Web (Santos, 2006) is related with the new web environment, with the primary purpose of understanding the meaning of information that perfectly matches our needs rather than simply showing contents. Web 3 is based on Semantic Web, Web 2 applications, and artificial intelligence, and it offers value to users that utilize a more intelligent web by allowing them to have a better experience. (Wall, 2012). It takes into account the users' individual requirements. It's a new online ecosystem that incorporates user-generated data to create new meaning. Unlike web 2, which relies on user involvement, web 3 relies on user cooperation. It's also known as intuitive web because it enables cross-interactions across web services. It will be able to identify new venues for a value chain that is not restricted to the web in this period. Customers' shopping experiences will be more immersive and broadened (Pandit, 2010).

Here, businesses will not only be evaluated based on their profits but also in terms of their behaviour towards humans and the planet and the psycho- spiritual benefits will be the essential needs of consumers (Balzarova and Cohen, 2020). Values oriented marketing means constraints and additional costs, a classic marketing strategy oriented towards specific causes and integrative of values in the DNA of the brand (Miranda, 2014).

Impact of web 3.0 digital marketing on startup businesses in the United States

Web 3 digital marketing has had a huge impact on how individuals interact with one another over time. It has also had an effect on people's routines, work, purchases, and way of life (Osterwalder and Pigneur, 2010). In this context, American startup companies like as Bravado, Flowcarbon, Buck Stash, and Crowd Venture Capital have greatly benefited from the use of this platform (Saraf and Sabadra, 2018).

The introduction of the web 3, which saw an increase in the number of users from 50,000,000 to 1,000,000,000 to 2,500,000,000 in web 1, web 2, and web 3, respectively, has demonstrated the potential for businesses to thrive in the digital world. This is shown in the figure below:

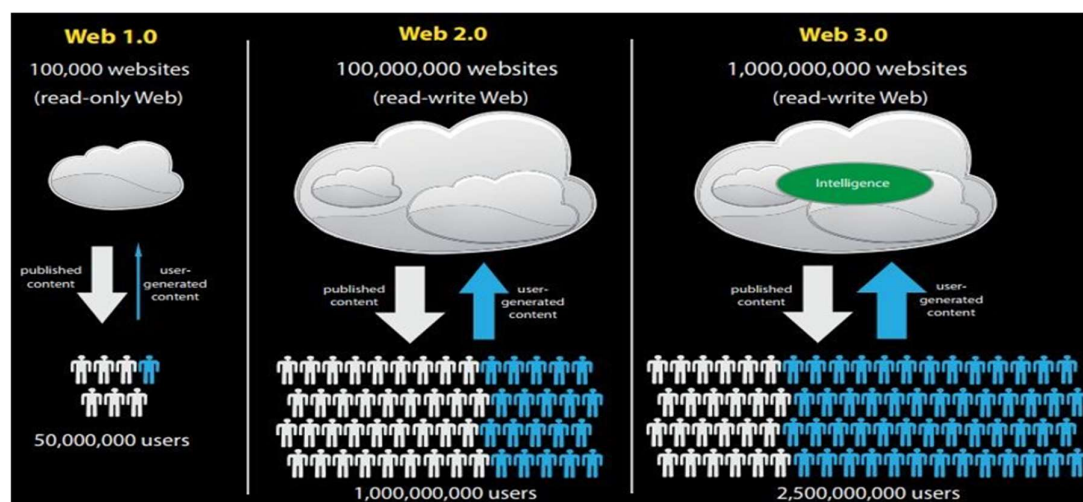


Figure 3. Web users (Web 1, web 2, and web 3)

Source: Researcher's Computation

As seen in Figure 3, the number of people using Web 3 is growing, and as a result, businesses, particularly startups in the United States, are using it for their digital marketing. According to Morris (2011), unlike web 1 and web 2, the web 3 is more decentralized, giving users the opportunity to choose where and how they will be advertised to (Evans, 2019). This has also proven to be beneficial to new enterprises, particularly in the United States. These businesses are able to better understand the psychology of their target audience through this method, depending on what they like and how they want it presented. As explained by Shaltout and Salamah (2013), this helped firms improve sales and profit, allowing them to meet their objectives. This is illustrated in the diagram below:

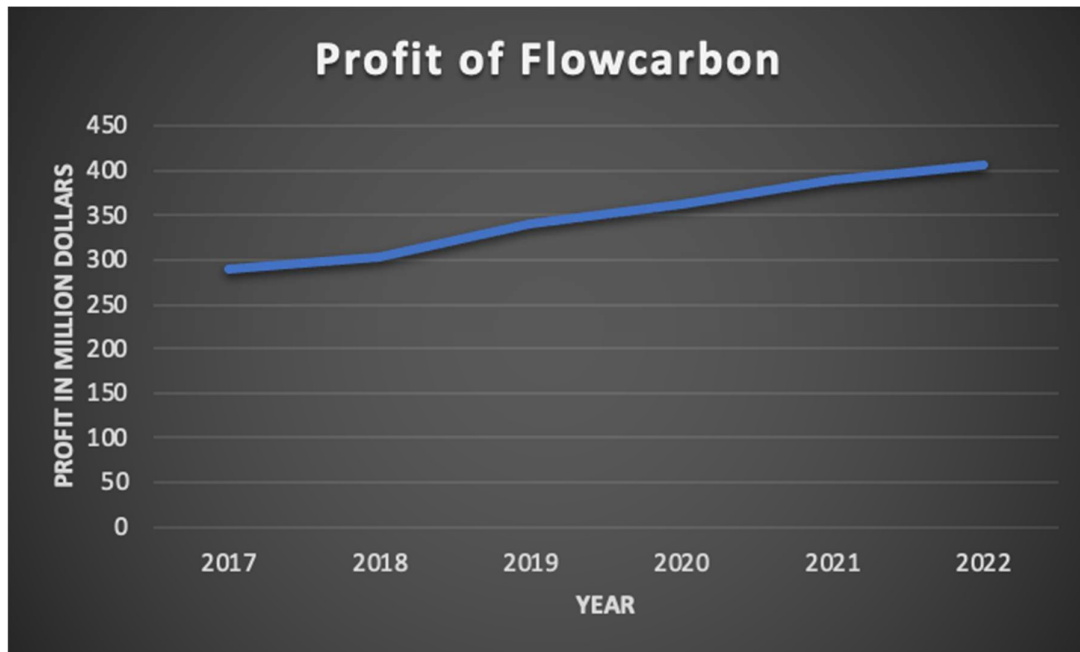


Figure 4. Profit of Flowcarbon from 2017 to 2022

Source: Researcher's Computation

Figure 4 shows that Flowcarbon's profit has been steadily increasing from 2017 to 2022. According to Balzarova and Cohen (2020), this is due to Flowcarbon's increasing adoption of web 3 digital marketing, which has enabled the company to proactively optimize its content and strategize for search. Web 3 enhances the user experience by delivering rich and dynamic advertising opportunities, as JOHNS and Johns (2015) demonstrate. This is beneficial to digital marketers and businesses since they can now send more targeted advertisements to their audience and enhance profits. Bravado has been able to boost its revenue on a geometric basis as a result of its implementation of web 3 digital marketing. The graph below depicts this:

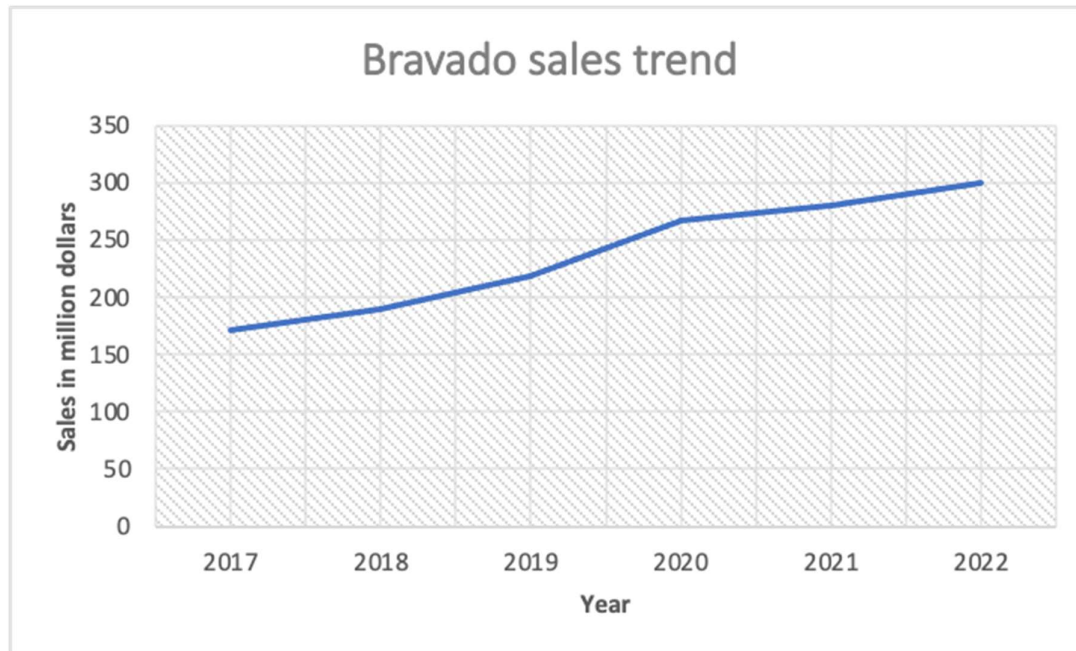


Figure 5. Bravado sales trend from 2017 to 2022

Source: Researcher's Computation

Since 2017, Bravado's sales have been on an upward trajectory, as shown in the graph above. Judging from the graph, Bravado sales climbed from USD 150 million in 2017 to USD 302 million in 2018. This demonstrates that, despite being a startup in the United States, Bravado has over-planned its digital marketing through the use of web 3. Snae and Brüeckner (2007) are of the view that an increase in a company's sales and profit through the use of web 3 digital marketing shows an increase in the company's wellbeing, which can then be transferred to the workers' welfare. Rather, corporations with greater profit that is partly due to worker input compensate their workers for their additional contributions to the company. In a study conducted by Pandit (2010), he discovered that Buck Stash, a startup firm in the United States, has had a significant reduction in staff turnover as a result of proper compensation and job satisfaction. This is shown in the diagram below:

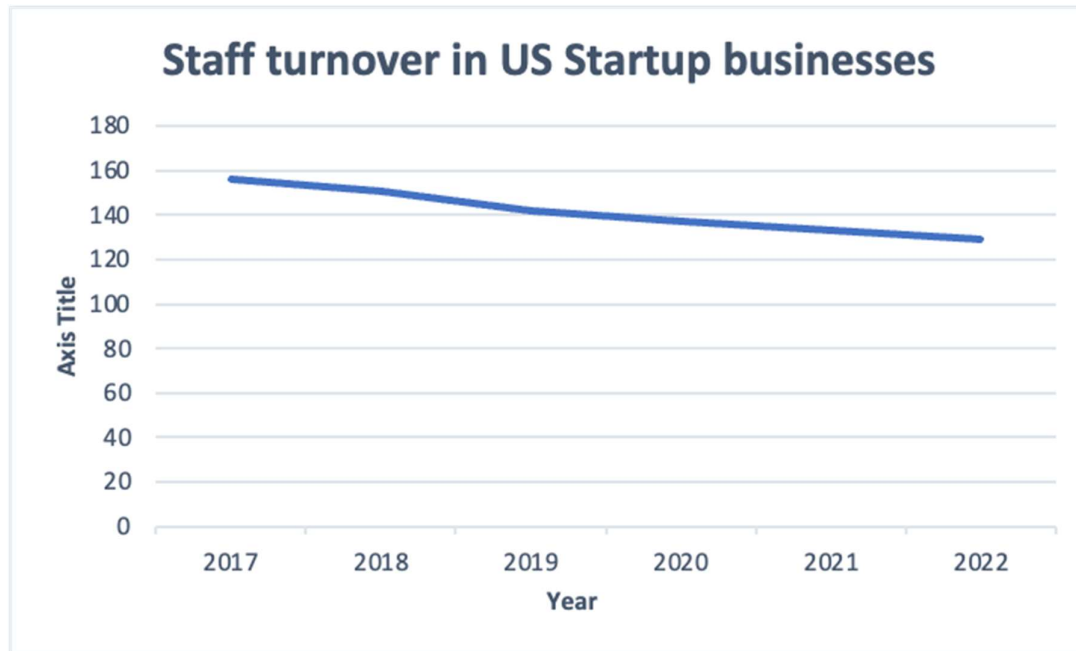


Figure 6. Bravado Staff Turnover
Source: Researcher's Computation

Bravado's workforce turnover is depicted in Figure 6. According to the graph above, Bravado has had a minimal workforce turnover from 2017 to 2022. Trastour (2002) attributed this to the company's use of web 3 digital marketing, which has improved sales and profit, resulting in higher remuneration for its employees and good employee satisfaction. Furthermore, Bravado's welfare grew since the company was able to lower the cost of training and retraining employees who had been lost due to lower welfare. This contributes to the company's increased net cash flow. Overall, web 3 digital marketing has enhanced business sustainability, particularly for startups in the United States. This is described in the figure below:

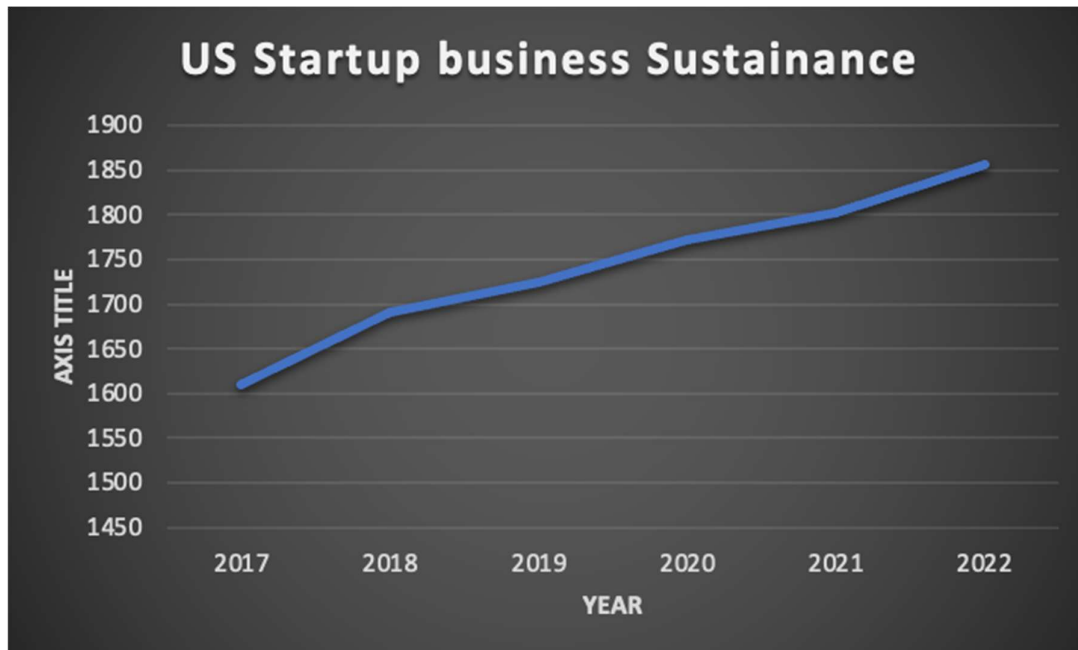


Figure 7. US Startup Business Sustainance from 2017 to 2022

Source: Researcher's Computation

On the basis of the graph, it can be observed that the sustainability of new enterprises has improved throughout the years, from 2017 to 2022. In other words, the figure depicts an increasing tendency of startup business sustainability, as indicated by Lal (2011), which attributes this trend to the increased usage of the web 3 digital marketing platform by these startups in the United States.

Conclusion

Using case study research design, this study has adequately and thoroughly studied web 3 digital marketing and its impact on startup businesses in United States. The study's goal was also to look into the history of digital marketing. The data for the study was gathered from secondary sources such as online sources, journals, articles, internal records, government publications, and newspapers, among others. In addition, qualitative analysis was used in the study, which was supported by graphical representation of data. According to the conclusions of this study, web 3 digital marketing has enhanced the performance of new enterprises in the United States dramatically. This is shown in Flowcarbon's constant increase in earnings, which increased from USD 150 million in 2017 to USD 302 million in 2019. This represents a profit boost of almost 50% for the corporation. The study also looked at Bravado's sales trends, and it was discovered that the company's sales had increased from 2017 to 2022. According to the findings of the survey, web 3 digital marketing has been a tonic for the development and growth of startup enterprises in the United States and throughout the world. According to the report, startups, as well as existing and long-standing organizations, should use web 3 digital marketing to accelerate their growth, as it has become a must for faster business growth.

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