Free Digital Information

Individual Report - Regulation Problem

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1) Introduction

The internet, a technology that shaped the world, began its journey in the late 1960s as a project started by the United States Military. Called ARPANET, it was originally designed to allow computers to communicate with each other over long distances (Abbate, 1994). The development of this project laid the foundation for the modern internet. Over the decades, the internet has evolved from a small military tool into a vital part of daily life, influencing nearly every aspect of modern society (Abbate, 2001).

2) Objectives of the Paper

The primary objective of this report is to explore the implications of free information available on the internet for economic activities, focusing on new market industries and the evolving strategies for protecting property rights. The report will analyze how traditional economic models are transformed by the abundance of free digital information, and how people can leverage these new tools to make money on the internet.

3) Understanding Free Digital Information

3.1) Characteristics of Free Digital Information as a Resource

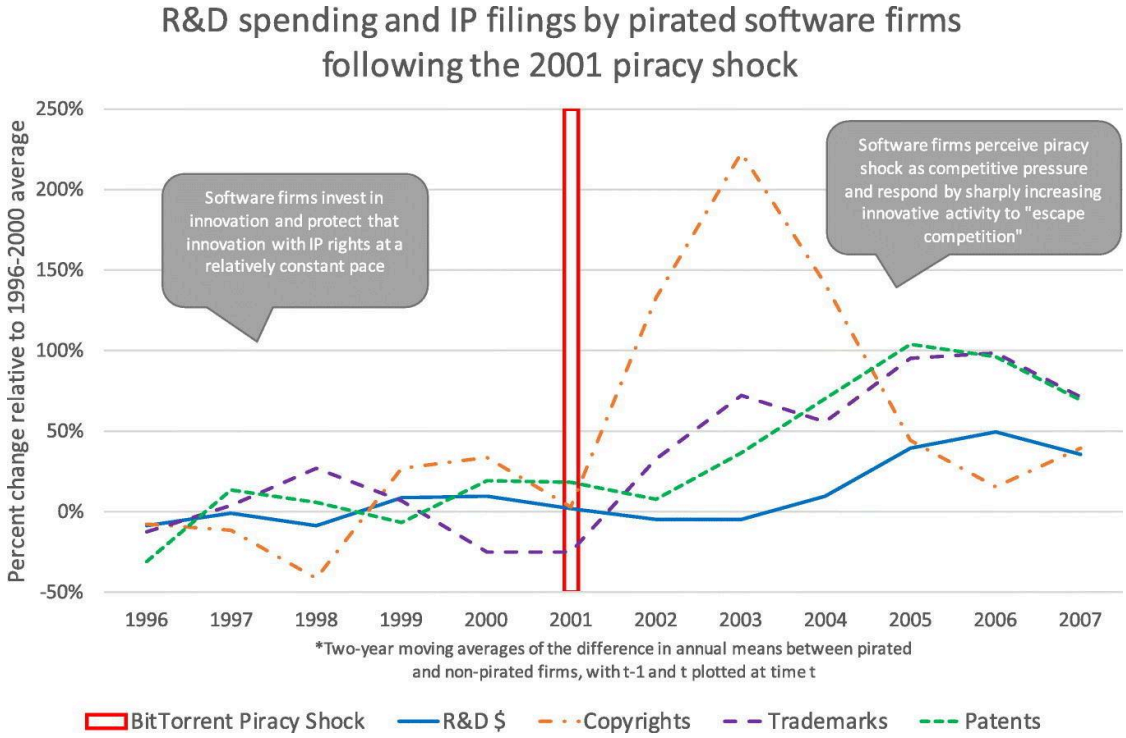
There are two critical characteristics which are necessary to understand when attempting to understand the economics of digital information. The first one is non-rivalry, which implies that the consumption of digital information by one individual does not deter or prevent its consumption by others. Unlike physical goods, which are known to have a rivalrous relationship, digital data can be used or shared repeatedly without losing its quality or quantity. Because of this nature, digital information creates positive network effects, as utility and accessibility increase the more it is consumed. However, this very nature also encourages the illegal sharing of digital information, also known as piracy (Varian, 1999).

The second critical characteristic digital information exhibits is that of zero marginal cost. Producing an additional copy of a digital item, such as the Microsoft Word software or an Instagram video essentially costs nothing, and can be duplicated and distributed infinitely with little to no cost. This contrasts sharply with physical goods that require more physical resources for each additional unit produced. This aspect of digital goods has drastically changed market dynamics, particularly in sectors like software, where the ease of replication challenges traditional pricing and copyright models (Shapiro and Varian, 1999).

3.2) Digital Piracy

In order to fully understand the economics of digital information, it is important to understand piracy. Piracy is a significant consequence of the boom of free digital information and the digital information era. Due to the nature of free information on the internet, and how easy it is to reproduce and share, it is often done so illegally. The widespread action of piracy disrupts the ability of digital creators and businesses to make money from their work, as the demand for their goods drop due to the availability of free, pirated versions. Widespread piracy can also undermine the incentive structures that fuel innovation and creation (Danaher et al., 2010; Waldfogel, 2017).

Figure 1:



Source: ScienceDirect

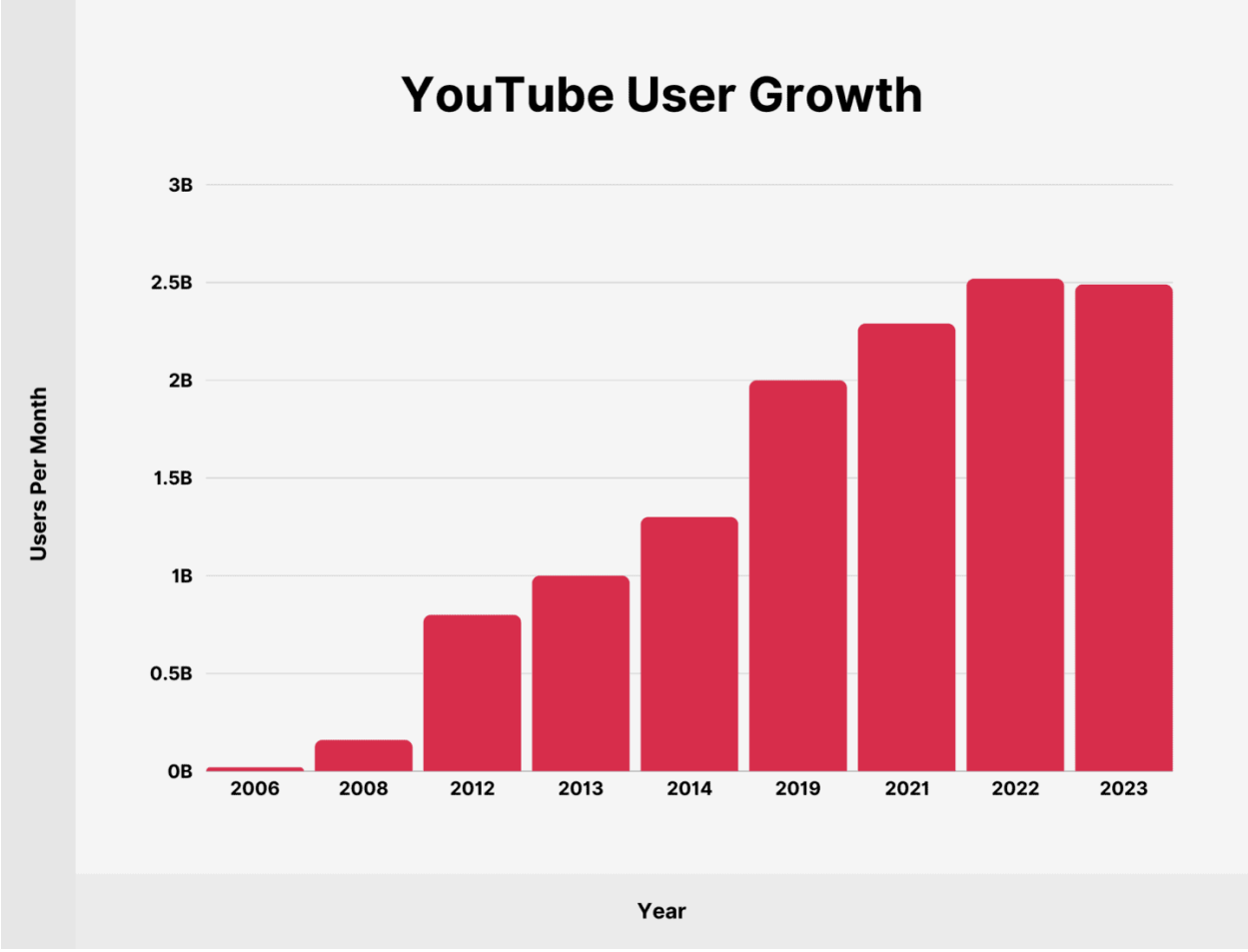
Figure 1 shows a clear correlation between piracy and the responses of software firms in terms of R&D spending and intellectual property filings. Post the BitTorrent Piracy Shock of 2001, shown in the graph by a rise in R&D expenditure that year and an increase in patent filings, software companies had increased the amount they invested in innovation as a competitive step to offset the impacts of piracy. This trend in the graph supports the idea that the effect of mass piracy may create an environment leading to innovation, causing software and IT companies to develop better technologies to stay on top.

4) Digital Economic Activities

Due to the nature of free digital information, many new doors have been opened in terms of economic activities which are capable of monetizing free digital information. This transformation is largely driven by the characteristics of digital goods such as 0 marginal cost and non-rivalry, which allow for the appearance of more innovative business models.

4.1) Content Creation

Figure 2:



Source: Backlinko

One such business model that has grown immensely due to free information on the internet is content creation. This model includes platforms such as YouTube, Instagram, Facebook, Tiktok and countless more. As displayed in Figure 2, the amount of users on Youtube alone has been increasing immensely over the past 13 years, and has plateaued around 2 - 2.5 billion years in the past 3 years. Creators on Youtube and such platforms leverage the immense reach of the internet to create value in themselves of the content they produce. Through this, they are able to generate large amounts of income through advertising revenue, such as youtube ads, external sponsorships through companies and business, audience interactions like comments and subscriptions, and building their own brands through the audience they built up. This attention based economy drives significant online traffic and engagement, influencing broader digital marketing strategies and consumer behaviors (Pruthi, N., Wadhwa, R. and Bansal, R., 2021).

There are very low barriers to entry to a content creator, you just need an access to the internet through some sort of device that can make videos or take pictures. Anyone, even a student can manage this while studying or working full time, another reason why content creation platforms like Youtube have grown so much since the dawn of the digital age.

4.2) E-commerce and Digital Marketplaces

E-commerce platforms like Amazon or Ebay enable anyone from a university student to a small business to sell their products to nearly anyone anywhere. These digital marketplaces analyze consumer behavior and utilize advanced analytics to offer optimized and efficient shopping experiences, all through the internet. Extremely recently, the boom and integration of AI has caused the E-commerce sector to flourish even more, enabling more seamless service offerings with the vast array of machine learning tools now available as free digital information (Pavlou, 2003).

Anyone can start an Ecommerce store on Ebay or even through an Instagram Automation page, creating their own product website through tools like Shpify or Wix. Through places like Aliexpress or Alibaba you can secure large quantities of a product you want to sell for cheaper prices, and then promote through your Instagram page or Facebook ads. This is a very viable strategy for students who have grown up on platforms like Instagram, making this type of Ecommerce strategy very popular nowadays, especially amongst people aged from 18-25.

4.3) Subscription Based Business Model

Subscription based platforms like Netflix and Spotify are now and since the start of their existence have been some of the biggest companies in the world due to their popularity. They

revolutionized how everybody consumes content like movies, TV shows and music by providing a legal and reliable alternative source to pirated content. These platforms and ones like them provide unlimited access to their database of content for a fixed fee every month or year, and have proven to be an extremely effective business model over the past 5 -10 years, especially around the times of the pandemic. The success of platforms like Netflix and Spoifty is reflective of a larger scale shift in consumer preferences towards on-demand content, showing the significant impact that the internet has had on the way people consume media (Hallinan & Striphas, 2016). These platforms are also constantly improving due to the vast amounts of consumer data they are able to collect, which allows them to better recommend content to users and allows for a better user experience in general.

Due to the high degree of personalization that occurs on subscription based platforms, they cause the consumers to become locked-in, as they become dependent or would face high switching costs when switching to another platform that provides a similar experience. An example of this can be seen through Spotify or Apple Music. These have been the 2 biggest music streaming platforms for a long time, and many people have been using them for many years. Due to this, people have developed playlists that they do not want to lose, as well as the algorithm recommending them music they like based on their past history. If someone using Spotify for the past 5 years were to switch to Apple music, they would lose all their music and would essentially have to start from scratch. This type of platform environment creates a sense of loyalty within the customer, making it so that they will be unlikely to stop paying for this service.

4.4) Gig and Freelance Platforms

Gig and freelance platforms such as Upwork, Freelancer, and Fiverr have also experienced growth due to the abundance of free information available on the internet. They provide an accessible and flexible way for individuals to offer their skills and services globally. These platforms capitalize on digital technologies and the skills of the people on their platforms to match freelancers with clients, enabling a seamless exchange of specific services to clients who need them. Due to the nature of the internet breaking down geographical barriers and allowing a diverse range of skills and services to be marketed to a global audience, people can now find someone to do almost any task they need through the internet, and someone else can get paid for a skill that they are good at without having a large network of people.

Network externalities occur when a product or service increases in value as more people use it. On gig and freelance platforms, this effect is extremely evident, as a larger number of users enhances the platform's utility for everyone. More freelancers attract a broader client base seeking diverse services, while more clients offer freelancers increased job opportunities and

chances to get paid. This mutually beneficial system, driven by the internet's global reach, is fundamental to the success of these platforms.

5) Safeguarding Intellectual Property

Transitioning from the new industries and business models created by the availability of free information online and how people can make money through them, it is necessary to talk about the challenges of battling piracy and safeguarding intellectual property. The digital age has caused three challenges to emerge, but in the evolving digital world we live in, many strategies and technologies have been developed to counter them.

5.1) Digital Rights Management

One of these strategies is known as DRM (Digital Rights Management). This strategy, implemented by large companies such as Microsoft and Apple, allows them to control the access and distribution of their digital content. DRM systems deter piracy by encrypting digital information such as software and only allow access to those users that have been given permission, such as people who have paid for it (Brousseau, 2007).

5.2) Legal Processes

In addition to technological solutions such as DRM, there have been many legal structures and processes put into place that also contribute to the protection of intellectual property. Policies like the DMCA (Digital Millennium Copyright Act) and the European Union Copyright Directive offer legal support for copyright holders. This legal backing is critical for platforms and creators to maintain control over their digital works and combat Piracy and other forms of people stealing their intellectual property (Mcevedy 2002). Both DRM and the legal processes work together to help digital creators and businesses protect their intellectual property online.

These strategies and technologies put into place to combat intellectual theft and piracy are not total failures, but there is most likely quite a bit of illegal reproduction and distribution of copyrighted digital content that still occurs all over the world. Due to the nature of free information on the internet, how easy it has become to copy and share files, combined with expansive reach of the internet, it is easy to see how it can be difficult to enforce intellectual property rights completely and get rid of all piracy of copyrighted digital content.

6) Conclusion

In conclusion, the emergence of the internet has revolutionized the way we access, distribute, and monetize information. The distinct characteristics of digital goods, such as non-rivalry and 0 marginal cost, have created the conditions for diverse economic ventures, ranging from digital marketplaces to creative content platforms, reshaping traditional business models, how people make money and consumer behaviors. Due to the emergence of things like advanced data analytics, Instagram Automation and Facebook ads, just to name a few, the landscape of business and who can make money has changed for the better, allowing almost anyone who wants to put in the work and learn the skills to build a business online.

However, this transformation is not without its challenges. The abundance of digital piracy has prompted the need for tactical strategies to protect intellectual property, including advanced legal measures and DRM. Despite these issues, the digital age presents an array of opportunities. With the right knowledge and application, individuals and businesses can use these developments to create, innovate, and secure economic growth in our increasingly digital world.

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