DOI:10.5281/zenodo.15075927

On the Irrelevance of Prices in the Digital Age

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Abstract: This article makes the case that monetary prices have become less relevant in the digital age, while time, data and networks are the new market forming moment. Prices have decreased in importance to understand market dynamics between supply and demand in the digital age for several reasons: First, marginal costs of digital goods are often close to zero in online markets – meaning that an additional participant using digital goods only increases network benefits but does not entail substantial production cost increases. For instance, freemiums and subscription models offer basic online services for free for the masses and reap some benefits from premium subscriptions of some users who gain extra services or access. Data has become the new currency of information exchange, which results in online goods and services offered for free in lieu of access to information of user data. Network access has become the new demanded good, which is supplied by online social media platforms. On the supply side, individuals are invited to join to form a network for free in order to build a vital engagement community. Internet online service providers are also able to benefit from targeted or classified online advertisement space. The more people join their networks, the better the ecosystem growth is and user engagement, which all boost online advertisement space pricing, generating more revenue for the platform provider, who is not constraint with much more marginal costs incurred from one more user using the platform. If the platform providers sell premium accounts with extra features, the online digital space can be used efficiently with dynamic and personalized pricing to adjust prices in real time and based on the anticipated consumer budget and purchase behavior patterns derived from big data analysis. Digital markets also offer more of an abundance in complexity and opportunity than physical markets as the technical capacities are more constraint by storage and energy rather than physical space and distance. Pricing is therefore more dependent on access to online communities and interesting engagement opportunities than physical transfers of goods or provision of traditional services. Online markets are also more likely to offer decentralized solutions and open-source models, in which people contribute themselves with their time to provide content and software development, which has become a more creative source of value rather than transfer of payments. The discussion reflects on the role of determining new value creation and consumer choices in the digital economy.

Keywords: Decentralized Economy, Digitalization, Exchange, Innovation, New Markets, Online Social Media Platforms, Price, Value

Introduction

This paper discusses modern price effects in the digital economy. It thereby argues that classical traditional pricing models are not as relevant for capturing market dynamics in the digital social online media markets. In neoclassical economics, prices are determined by supply meeting demand. Prices order human behavior and guide decisions to depart with funds for consumption. Prices also influence innovation and production of goods and services. On a higher level, prices are also igniting social and population trends.

The advent of digitalization has revolutionized nearly every aspect of modern life, transforming industries, economies, and the way people interact. Social media has become an integral part of daily life, reshaping the way people connect, communicate, and share information online. Platforms like Facebook, Instagram, Twitter, TikTok, and LinkedIn offer individuals, brands, and organizations a space to engage with a global audience in real-time. Social media fosters community building, promotes self-expression, and serves as a powerful

tool for marketing and brand awareness. It allows users to create and share content, ranging from personal stories to professional achievements, while also influencing trends, opinions, and social movements. Interestingly, social online media changes price dynamics due to various specificities. This paper makes the case that classical prices have become more irrelevant in the digital age.

In order to explain the irrelevance of prices in the digital age, this paper covers the relatively-low marginal costs of digital goods; freemium and subscription models; data as a currency; network effects in digital online media platforms; dynamic and personalized pricing opportunities online; digital abundance versus scarcity in physical markets as well as decentralized and open-source models.

The Marginal Cost of Digital Goods is Near Zero

In traditional economics, the marginal cost of producing an additional unit of a product determines pricing. However, in the digital world, the marginal cost of producing another copy of software, an e-book, or a digital song is nearly zero. Once a digital product is created, it can be copied, shared, and distributed without the raw material, labor, or logistics costs that physical goods require.

In the digital social online media economy, the marginal addition of users and their consumption actually creates value of network benefits. The more users are using a platform, the better the information exchange and network diversity becomes, which enhances the number of attracted users, the time spent on the platform and the engagement with the platform.

This shift has led to new pricing strategies, such as pay-what-you-want models, free distribution with premium add-ons. Monetization now occurs less from selling a good but more from selling online digital advertisement space. Since pricing is no longer constrained by production costs in factory operations, companies focus more on value perception, engagement, and competitive positioning.

Overall, the digital age challenges traditional pricing models and forces businesses to rethink how they assign value to their products and services. Time spent on social online media is the price people pay for forming a network that is attractive to other consumers. Information shared on social online media platforms is the currency users pay for using online tools for free. The shared information can be amalgamated to big data, from which inferences can be derived about trends and comparisons with other users.

Freemium & Subscription Models

One of the most successful monetization strategies of the digital era is the freemium model. Companies provide basic access to their digital products for free while charging for premium features (e.g., special advanced tools, markings on the account etc.), exclusive content, or enhanced experiences. This model works well for software (e.g., Slack, Zoom), music streaming (Spotify), mobile applications and social online media.

Similarly, subscription-based models have replaced traditional one-time purchases. Consumers now pay for ongoing access rather than outright ownership. Netflix, Adobe Creative Cloud, and Microsoft 365 illustrate how subscriptions generate steady revenue streams while keeping customers engaged. The shift from ownership to access highlights how pricing strategies have evolved to focus on long-term relationships and customer satisfaction rather than one-time individual transactions.

This pricing in tranches has its merits for oftentimes occurring by default and consumers incurring high costs over time rather unnoticingly. The subscription pricing model, however, leaves room for flexibility of consumers to exit markets. Online providers therefore have to fascinate and engage consumers on a long-term basis. In the case of social online media platforms, changing features or ownership of the platform may entertain

consumers longer while growing a network also helps to make the customer experience richer. More than in traditional production markets, the ownership of social online media platforms plays a role in the usage of the platform and consumer patterns.

The Rise of Data as Currency

In the digital economy, money as a currency transferred for a price charged for consumption is not the only currency. In social online media platforms, time spent and information shared online has become the new asset as for forming data and a network that is of value to attract other users to join. Companies like Amazon, Google, Facebook, and TikTok offer free services while monetizing user data through targeted advertising and offering big data generated insights. Rather than charging customers directly, businesses harvest information about user behavior, preferences, and interactions to refine their offerings and increase ad revenue but also to allow other market actors to serve them more strategically.

This shift has led to privacy concerns and regulatory challenges, with debates over how data should be collected, stored, and monetized. Despite this, data-driven pricing models are now dominant, where the real "price" of using a platform is the user's willingness to share personal information as well as spend time and let go of certain parts of privacy. The European General Data Protection Regulation (GDPR) is creating worldwide standards to cope with this implicit pricing of free use of online platforms.

Network Effects Drive Value

Many digital platforms derive their value not from individual purchases of goods and services online but from network effects and selling the platform to users who hold the hope of access to a vibrant network and interesting entertainment opportunities. A network effect occurs when a product or service becomes more valuable as the more people use it. Network value increases exponentially with the number of users joining on social online media. Social media platforms (e.g., Facebook, Twitter, LinkedIn), online marketplaces (e.g., Amazon, eBay), and collaboration tools (e.g., Slack, Zoom) but also the sharing economy (e.g., Uber, Lyft, AirBnB) thrive because their utility increases with more users.

Because of network effects, companies often prioritize growth over short-term profits. Like in the case of a launch of a new app or social online media platform, users are most of the time invited to join for free and if they want to upgrade for special features or after time when a large network has been built, the corporation may starts charging for services. They offer services at minimal or no cost to attract users and establish dominance. Once a platform reaches critical mass, monetization strategies—such as advertising, subscriptions, or partnerships—become more effective revenue generating targets than attracting even more users. Once users are locked-in, some network economy platform providers start charging prices or higher mark-up fees, e.g., as in the case of Adobe, AirBnB, Dropbox or Skype happened. The business life cycle therefore may first focus on network and then – when a vital network has been established and users are locked-in – in subsequent periods on more adding features and selling them or establishing long-term revenue streams via subscriptions.

Dynamic & Personalized Pricing

Pricing in the digital age is no longer static, meaning that one price exists for all customers alike. E-commerce and digital services now leverage Artificial Intelligence (AI) and big data to adjust prices in real-time based on demand, location, browsing history, or even individual purchasing behavior. This is known as dynamic pricing.

Airlines, ride-sharing apps (e.g., Uber, Lyft), and e-commerce giants (e.g., Amazon) use algorithms to maximize revenue by offering different prices to different users at different times. Personalized pricing is becoming more sophisticated, allowing businesses to tailor offers based on consumer willingness to pay and reap markets most efficiently. While

beneficial for companies, this practice raises ethical questions about fairness and transparency.

On the other hand, consumers have more than ever opportunities to bundle together to make bulk purchases finding each other on online platforms that connect consumers with similar purchase needs (e.g., like Groupon). Consumers also have opportunities like never before to extend reviews and publish them online, which raises transparency of the consumption experience. Consumers also have access to information about promotion codes that are shared online widely but can also use shopbots – automated tools or software designed to assist consumers in finding the best deals, comparing prices, and purchasing products online. This kind of modern shopping assistant is helping users navigate e-commerce websites by automatically searching for items, comparing prices across different retailers, and sometimes even applying discount codes. Shopbots are often used to streamline the shopping process and help users save time and money by identifying the most cost-effective options. Some shopbots are integrated with personal virtual assistants or browser extensions, while others may exist as independent websites or apps that allow users to input their desired product details.

Digital Abundance vs. Scarcity in Physical Markets

Traditional economics is based on the principle of scarcity—resources are limited, so prices regulate access. The more scarce a product is, the higher the likelihood is that this product is demanded at a high price. In digital markets, abundance is the default state. Digital books, music, movies, and software can be reproduced indefinitely at no cost, challenging the conventional relationship between supply, demand, and pricing. The consumption of a traditional good in a classical market also often takes away the opportunity for others to consume the same good, which is not the case in online markets as news online, for instance, do not deplete or degrade if being consumed.

Unlike in the real economy, in which the consumption of a good is often associated with the destruction of the good (e.g., food) or degradation of a good (e.g., clothing that wears out and cannot be shared), in the digital world consumption of online information does not deplete the information or takes away the opportunity or experience for others to consume the good. Even more so, the more people consumer information online, for instance on a social online media platform, the better the information gets as there is more opportunity to interact and shape the content via comments and crowd reflection.

As a result, many digital products are given away for free, with companies monetizing through alternative means like advertising, sponsorships, or community-driven donations. This abundance has also forced industries like publishing and entertainment to shift from unit-based sales to access-based models, such as streaming services. Abundance and constantly evolving information online as well as the constant update of online solutions also leads to subscription-based purchase models being enacted rather than one-time static price purchases for ownership. Decentralized creation of goods online – e.g., in the swarm information sourcing on social online media platforms – drives this trend of rather charging several times on a constant basis for subscriptions in contrast to classical goods' ownership models.

Decentralization & Open-Source Models

The rise of open-source software and decentralized technologies has further disrupted traditional pricing. Open-source platforms like Linux, Wikipedia, and blockchain projects (e.g., Bitcoin, Ethereum) rely on collaboration rather than fixed pricing models.

These decentralized ecosystems function without central authorities setting prices, allowing users to contribute, modify, and distribute resources freely. Crowdfunding, token economies, and community-driven development are redefining how digital goods are valued and sustained.

By eliminating centralized control, these models democratize access and encourage innovation, further diminishing the role of fixed pricing in the digital economy.

Discussion

The overall descriptive findings presented in this article challenge the conventional understanding of pricing and value in the digital economy. As traditional price mechanisms become increasingly irrelevant, businesses must adopt new frameworks to assess market dynamics and consumer behavior online in the digital age.

One key takeaway is that monetization strategies are now less dependent on direct sales and more on engagement, data utilization, and network expansion. The shift towards freemium models, personalized pricing, and data-driven revenue generation reflects a fundamental transformation in how businesses operate in the digital landscape.

However, these changes also raise critical concerns, particularly regarding consumer privacy, market fairness, and the ethics of dynamic pricing. In particular, the rise of social media has sparked debates around issues like privacy, misinformation, and mental health, as constant connectivity can lead to negative impacts on well-being. Despite these challenges, social media continues to shape modern culture, offering both opportunities and risks in an increasingly digital world.

Companies must balance profitability with transparency and consumer trust, ensuring that pricing mechanisms do not exploit users unfairly. Consumers on their part can bundle together and exchange information online about their customer experiences with certain online providers, which will help uphold ethical standards.

Moreover, the rise of decentralized models and open-source platforms suggests an ongoing trend toward democratizing access to digital goods and services. The implications of this shift extend beyond economics, influencing how society perceives ownership, collaboration, and innovation.

Ultimately, as digital markets continue to evolve, businesses and policymakers must remain agile, adapting to new technologies and consumer expectations while maintaining ethical and sustainable practices in the new digital economy.

As for future developments, the online markets are prospected to continuously shift powered by technology advancements such as Artificial Intelligence (AI), the Internet of Things (IoT), cloud computing, and blockchain, which continue to shape new trends across sectors. One of the most prominent trends is the rise of automation and AI-driven decision-making, enabling businesses to optimize operations and enhance customer experiences. Additionally, the widespread adoption of 5G technology is accelerating digital connectivity, offering faster and more reliable communication networks. Remote work, e-commerce, and virtual experiences have also gained significant traction, driven by the pandemic and a growing demand for convenience and flexibility. As digitalization evolves, the focus is shifting toward data privacy, cybersecurity, and ethical AI, ensuring that these innovations are used responsibly and inclusively.