

ST.GALLEN SYMPOSIUM

Global Essay Competition 2024

Title: Applying a Pigouvian Tax on Social Media Platforms to Free Up Time

Essay:

In the age of digital ubiquity, where time appears to be slipping through our fingers, the allocation of our most precious resource – time – has become a subject of critical importance. Time, universally acknowledged as finite and invaluable, is often squandered rather than wisely invested. Drawing from Seneca's ancient wisdom, our temporal predicament is not merely a consequence of life's brevity but stems from our habitual mismanagement of time. Indeed, the rise of digital technology has greatly complicated this time management paradox, particularly among teenagers, who are deeply immersed in a screen-centric culture, spending an alarming proportion of their day on social media. A recent Gallup survey revealed that American teenagers average 4.8 hours daily on these platforms (Rothwell, 2023), a trend exacerbated by the lockdowns during the COVID-19 pandemic. In this context, it is more important than ever to implement effective strategies to reclaim our precious time and aligning it with our priorities and aspirations.

Social Media Externalities

The extensive impact of social media on our society goes beyond just communication, introducing various secondary impacts.

One of the most significant one is the alteration of social interactions. While social media have made it easier to maintain relationships across long distances, they can also lead to a sense of isolation and loneliness (Primack et al., 2017). This paradox arises because virtual interactions often lack the depth and emotional connection of face-to-face conversations, leading to feelings of disconnection and social isolation (Bonsaksen et al., 2023).

Another major impact of social media is on mental health. Indeed, there is a tangible link between social media usage and a deterioration in overall well-being (Kross et al., 2013). In particular, adolescents engaging in over three hours of daily social media usage are at a greater risk of developing mental health issues, such as anxiety and depression (Riehm, Feder & Tormohlen, 2019). Furthermore, excessive and inappropriate social media usage may lead to addiction, with brain structure alterations mirroring those observed in substance or gambling addictions (He, Turel & Bechara, 2017). Behavioral changes such as sleep disturbances (Levenson et al., 2016), diminished self-esteem (Chamsi et al., 2022), and attention-deficit/hyperactivity disorder (Farchakh, 2022) further exemplify the adverse consequences of excessive social media usage. This addictive tendency not only undermines personal well-being but also carries broader implications for productivity and societal engagement.

Indeed, time spent on social platforms translates into significant opportunity costs, possibly impacting economic productivity and individual time management in the long term. For instance, the time children spent on social networks has been shown to detrimentally affect their writing skills (Worku, 2022), potentially hindering their future employability prospects. This diversion of time and attention away from productive endeavors to digital consumption represents a substantial cost to both individuals and the economy at large. Hence, these externalities should be internalized to correct this market failure.

Current solutions and their limitations

At the individual level, strategies to mitigate excessive engagement with social media platforms are limited and often insufficiently effective. This inadequacy is primarily due to the non-coercive nature of the existing solutions and the lack of governmental policy addressing the issue.

One of the first solutions to address social media overuse is the implementation of built-in digital timers on smartphones. These timers, such as Screen Time on iOS or Digital Wellbeing on Android, allow users to set daily limits for their social media usage. Although these timers can be helpful in raising awareness of users' screen time, they should not be considered a standalone solution. Indeed, they lack any form of enforcement mechanism, thereby diminishing their efficacy.

The second solution involves downloading third-party applications designed to restrict app usage. These apps, such as AppBlock, Flipd, or Freedom, have gained popularity in response to the rising demand for effective solutions. These applications enable users to block access to certain apps after surpassing a predetermined usage threshold. Despite their proliferation, these applications do not address the fundamental addictive qualities inherent in social media platforms. They act as mere band-aids over a deeper, systemic problem of digital addiction. They only offer a temporary respite without altering the underlying compulsive behavior patterns fostered by social media.

As a last-ditch effort, digital detox programs have been introduced, specifically tailored for individuals whose social media usage has detrimentally affected their mental health. These programs are a stark reminder of the point where an individual's interaction with social media moves from a routine practice to a level requiring therapeutic intervention. However, their emergence highlights the shortcomings of more traditional approaches in adequately addressing social media overuse. This calls for a more integrated approach that combines technological solutions, policy-driven interventions, and comprehensive societal education about the dangers of excessive social media consumption.

It should be noted, however, that at a national level, some countries have enacted legislation to oversee and regulate the online activities of minors. A notable example is the stringent restriction on online gaming in China, often conflated with social media use due to its interactive nature. In 2021, China imposed a law limiting minors to playing online games for only three hours per week - specifically, one hour on Fridays, Saturdays, and Sundays, and on public holidays, between 8 PM and 9 PM (Yang & Goh, 2021). This move aims to curb gaming addiction and its associated negative impacts on health and academic performance.

While this law represents a proactive approach to digital well-being, it also highlights the complexities and challenges of such regulatory measures. One major drawback is the difficulty in enforcement, as young users may find ways to circumvent restrictions, such as using adult identification (*ibid.*). Additionally, this approach has sparked debates about personal liberties and the state's role in regulating private life. Critics argue that while the intention is to safeguard youth, such strict measures might not address the root causes of why young people engage in excessive online activities.

Applying a Pigouvian Tax

To address the various limitations outlined previously, I propose to introduce a new approach that is divided into two stages: the imposition of a Pigouvian tax on social media platforms and a subsequent redistribution mechanism to encourage healthier habits.

The initial phase of the proposed intervention involves the implementation of a Pigouvian tax, calibrated in proportion to the time a user spends on a social network. A Pigouvian tax, named after the economist Arthur Pigou (1877-1959), is a tax imposed on any market activity that generates negative externalities, which are costs not reflected in the market price. More specifically, the tax base would be a user's usage time, and the tax would be progressive to account for the negative impact beyond a certain threshold. The overall tax would be design to internalize the aggregate negative externalities associated with excessive social media consumption. In our case, the fundamental premise is that the onus of paying this tax lies with the social networks, rather than the users. Given that the majority of social networks operate on a free-use basis, the imposition of such a tax is anticipated to directly impact the profit margins of these platforms.

Subsequently, the second phase of the strategy entails the redistribution of the collected tax back to users who opt into this system. This mechanism functions by allowing users to set a desired time limit (T_d) for social media usage, while the system calculates the actual time spent (T_r). The

objective is deemed achieved when T_r is less than T_d . However, the criteria for the redistribution amount must account for two key factors: firstly, the ambition of T_d , where a more ambitious target (i.e., closer to zero) warrants a higher redistribution amount. Secondly, the greater the absolute difference between T_d and T_r , the more significant the redistribution should be. These constraints are designed to accomplish the dual goals of incentivizing users to set and achieve ambitious usage reduction targets.

This two-fold approach presents a novel method to address the challenges posed by the excessive use of social networks. By shifting the responsibility to the platforms and incentivizing users through a structured reward system, it offers a balanced solution that addresses both the supply and demand aspects of social media usage.

Direct consequences

The proposed solution is anticipated to induce significant alterations in both consumer behavior and the operational models of social media platforms.

On the one hand, the solution is expected to bring notable changes in how consumers interact with social media. A key aspect of this initiative is the establishment of a financial incentive program, aimed at curbing excessive use of social networks by providing monetary rewards. The objective is not only to discourage excessive use of social media platforms, but also to promote participation in healthier, non-digital activities by providing financial rewards for such engagements. This system is all the more relevant as adolescents from disadvantaged backgrounds are more likely to develop an addiction to social networks (Lenzi et al., 2023).

On the other hand, the operational models of social media companies are also set to undergo significant shifts. They will move away from their traditional revenue models, which are largely based on the amount of time users spend on their platforms. This shift, eased by the Pigouvian tax system, is expected to drive innovation, pushing these companies to focus more on the quality of content rather than the duration of user engagement. For example, the number of push notifications could be reduced, or algorithms could offer more content diversity and increase outside options. This change would not only promote the development of a healthier digital environment but also encourage the creation of business models that are less dependent of user engagement time, aligning more closely with recommended usage limits at a societal level.

Main critics and discussion

The first challenge encountered in the implementation of this framework pertains to the definition and calculation of the marginal social damage of social media. This is complex due to diverse externalities and varying damage based on usage time. A potential resolution to these conundrums lies in the utilization of advanced big data analytics and artificial intelligence methodologies. These technologies can proficiently process extensive datasets derived from social media interactions. The analytical focus could encompass discerning usage patterns, identifying content types that exhibit heightened engagement or addictive properties, and exploring the correlations between usage duration and variables such as self-reported well-being and productivity levels.

The second critic could concern a conflict between individual freedom and social responsibility. The divergent nature of social media usage among individuals necessitates a nuanced approach in the system's operationalization. For instance, on a single social media platform, you can find a range of activities, from streaming video games (which may not be generally considered productive), to accessing content that is informative and educational. Consequently, the proposed redistribution mechanism should be mandated for minors, with fiscal benefits redirected to their guardians, while adopting an opt-in framework for adult users. This provision allows individuals the discretion to tailor their screen time on social media within the system's parameters.

The third critic addresses user privacy concerns. Indeed, the redistribution model requires tracking the time spent by each user on social media platforms. This requirement underscores the imperative of aligning the system with stringent legal frameworks. The latter should precisely define the modalities for data collection, storage, and utilization. In instances where direct measurement of user time is objectionable, alternative metrics such as the frequency of posts, likes, or shares could be employed as proxies of time spent on the platform.

Ultimately, the success of the system hinges on the precise and open sharing of information by social media platforms, as well as the effective implementation of the tax. This involves providing details about user engagement time and sufficient data to facilitate the distribution of tax revenue. The reliability of this data must be strictly maintained, requiring regular independent reviews to verify adherence to rules and the correctness of the information.

Conclusion

Implementing a screen-time-based tax paid by social networks presents a viable strategy to address the escalating concerns related to the overuse of these platforms. This approach seeks to internalize the externalities associated with excessive social media use. Simultaneously, this policy balances the preservation of individual freedoms against the broader context of social responsibility. Adopting this tax model represents a significant shift, steering the digital environment towards greater accountability. It aims to align the use of social networks with our societal values and priorities, in a way that might echo the wisdom of Seneca.

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