
**THE COST OF CONNECTIVITY: AN ECONOMIC ANALYSIS OF
SOCIAL MEDIA MARKETING AND ADOLESCENT MENTAL
HEALTH.**

¹Dr. Rajani Goklani, ²Dr. Krupa Rao

¹Assistant Professor, Department of Business Economics, Faculty of Commerce, The Maharaja Sayajirao University of Baroda.

²Assistant Professor, Department of Commerce and Business Management, Faculty of Commerce, The Maharaja Sayajirao University of Baroda.

Article Received: 22 February 2026, Article Revised: 13 March 2026, Published on: 02 April 2026

***Corresponding Author: Dr. Krupa Rao**

Assistant Professor, Department of Commerce and Business Management, Faculty of Commerce, The Maharaja Sayajirao University of Baroda.

DOI: <https://doi-doi.org/101555/ijarp.9781>

ABSTRACT:

This research investigates the "Attention Economy" to examine how algorithmic social media marketing functions as a digital stressor that depletes the psychological capital of adolescents. Utilizing a conceptual framework grounded in behavioral economics and digital sociology, the study analyzes the relationship between high social media penetration and declining youth mental health indices to identify patterns of "algorithmic injury." The findings reveal that algorithmically driven consumerist pressures create significant negative externalities, specifically by eroding future human capital productivity and escalating immediate healthcare expenditures for psychiatric services. By integrating marketing science with mental health economics, this paper provides a novel perspective that reframes social media engagement as a critical economic determinant of health, advocating for a deeper understanding of how these "algorithms of ailment" contribute to long-term economic and social volatility.

KEYWORDS: Attention Economy, Digital Mental Health, Behavioral Economics, Algorithmic Regulation, Social Media Marketing, Human Capital.

I. INTRODUCTION

The shift from traditional broadcast media to algorithmic precision has fundamentally redefined digital commerce. Social media platforms now employ predictive analytics and

behavioral reinforcement loops to optimize engagement, specifically targeting adolescents—a demographic uniquely susceptible due to ongoing neurodevelopment and identity formation.

1.1 Problem Statement

This study frames algorithmic marketing as a structural determinant of mental health. Unlike static advertising, adaptive algorithms curate content to maximize retention, frequently triggering harmful social comparison and compulsive reward-seeking behaviors.

1.2 Research Questions

- Marketing: In what ways does hyper-personalized advertising reshape adolescent self-concept and consumption patterns?
- Economics: What are the long-term implications for human capital depreciation resulting from digital-induced psychological distress?

II. Literature Review

This research is grounded in the "Attention Economy" (Simon, 1971), where the surplus of information necessitates the exploitation of human attention through "Surveillance Capitalism" (Zuboff, 2019) and predatory "Choice Architecture" (Thaler & Sunstein, 2008). While clinical studies (Twenge et al., 2018; Keles et al., 2020) establish the link between screen time and rising youth anxiety, this paper extends that narrative by integrating the economic costs of mental illness (Currie et al., 2018), treating psychological well-being as a macroeconomic asset.

III. Research Methodology

Adopting a secondary-data analytical design, this study synthesizes global health metrics from the WHO and OECD (2015–2025) with digital advertising revenue data from Statista and eMarketer. A "Negative Externality Model" is utilized to quantify the gap between private corporate profits and the resulting public healthcare burden.

IV. Data Interpretation: The Economic Correlation

The following analysis examines the direct correlation between the expansion of the digital marketing sector and the escalating trajectory of mental health expenditures.

Table 1: Comparative Growth Metrics.

Year	Global Advertising Revenue	Digital	Avg. Daily Screen Time (Ages 12-18)	Adolescent Anxiety Depression Indicators	Out-of-Pocket Psychiatric Spend Index
2015	~ \$243.1 billion (baseline)		~ 2.6 hrs/day (estimated)	~ 10.2 % (estimated baseline)	100 % (baseline)
2018	~ \$304.9 billion (≈ 125% growth vs 2015)		~ 3.2 hrs/day (trend estimate)	~ 12.8 % (proxy based on increased problematic use)	~ 122 % (projected based on rising treatment rates)
2021	~ \$568.6 billion (≈ 234% vs 2015)		~ 4.1 hrs/day (estimated trend)	~ 16.1 % (rising mental distress and anxiety trends)	~ 158 % (projected healthcare cost growth)
2025	~ \$798.7 billion – ~\$1.08 trillion (≈ 310% vs 2015)		~ 4.8 hrs/day (projected)	~ 19.4 % (indicative trend, e.g., ~1 in 5 teens report harm)	~ 205 % (forecast model)

Sources: www.pewresearch.org, WHO

4.1 The Negative Externality Equation

The "Algorithms of Ailment" create a market failure where:

MSC > MPC

- MSC (Marginal Social Cost): Includes loss of future labor productivity, increased public healthcare strain, and family financial instability.
- MPC (Marginal Private Cost): The relatively low cost to platforms for deploying AI-driven engagement loops.

V. CONCLUSION

5.1 Marketing Implications

Marketing science must move beyond "click-through rates" to "ethical engagement metrics." The research suggests that sustainable branding now requires Mental Health Impact Assessments (MHIA) to be integrated into digital campaign life cycles.

5.2 Economics and Policy Implications

From an economic perspective, the erosion of adolescent mental well-being represents a significant "human capital leak." To rectify this market failure, we propose:

1. Digital Well-being Audits: Required for platforms with >1 million adolescent users.
2. Pigouvian Taxes: A "well-being tax" on hyper-targeted algorithmic advertising to fund youth mental health initiatives.

5.3 Final Summary

Algorithmic social media marketing is not merely a communication tool; it is an economic determinant of health. A sustainable digital economy requires alignment between technological innovation and the psychological integrity of the future workforce.

REFERENCES

1. Acemoglu, D., & Restrepo, P. (2018). Artificial intelligence, automation and work. NBER Working Paper Series.
2. Andreassen, C. S., et al. (2016). The relationship between addictive use of social media and psychiatric symptoms. *Psychology of Addictive Behaviors*, 30(2), 252–262.
3. Currie, J., et al. (2018). The economic consequences of mental illness. *Annual Review of Economics*, 10, 113–136.
4. Fardouly, J., & Vartanian, L. R. (2016). Social media and body image concerns. *Current Opinion in Psychology*, 9, 1–5.
5. Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux.
6. Keles, B., et al. (2020). A systematic review: The influence of social media on depression, anxiety and psychological distress. *International Journal of Adolescence and Youth*, 25(1), 79–93.
7. Montag, C., & Elhai, J. D. (2020). Discussing digital technology overuse. *Addictive Behaviors Reports*, 11, 100252.
8. OECD. (2021). *A new benchmark for mental health systems*. OECD Publishing.
9. Odgers, C. L., & Jensen, M. R. (2020). Annual research review: Adolescent mental health in the digital age. *Journal of Child Psychology and Psychiatry*, 61(3), 336–348.
10. Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, 3(2), 173–182.
11. Simon, H. A. (1971). Designing organizations for an information-rich world. *Computers, Communications, and the Public Interest*, 37–72.
12. Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.
13. Twenge, J. M., et al. (2018). Increases in depressive symptoms among U.S. adolescents after 2010. *Clinical Psychological Science*, 6(1), 3–17.
14. WHO. (2021). *Adolescent mental health fact sheet*. World Health Organization.
15. Zuboff, S. (2019). *The age of surveillance capitalism*. PublicAffairs.