



## The Boldness of an Intrepid Entrepreneurship with the Evolution of Fiber Internet and Positive Changes in Society

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### Summary

The digital revolution has been one of the main drivers of economic and social transformation in the 21st century. Within this scenario, fiber optic internet has emerged as an essential infrastructure for the development of new businesses, the expansion of access to information and digital inclusion. High-speed connectivity provides an environment conducive to innovation, allowing entrepreneurs to explore new markets, automate processes and increase their global competitiveness. Furthermore, the impact of fiber optics transcends the business sector, influencing education, teleworking, the digital economy and sustainable development. Given this context, this article seeks to analyze the relationship between the evolution of fiber optic internet and the strengthening of innovative and intrepid entrepreneurship, highlighting the benefits of this technology for society. The research uses a qualitative approach, based on a literature review and studies on the effects of advanced connectivity on the labor market, digital inclusion and the global economy. The results demonstrate that fiber optics not only enhances the creation of new business models, but also reduces social inequalities by democratizing access to information and economic opportunities. It is concluded that, to maximize the benefits of this technology, a joint effort between the government and the private sector is necessary to expand its availability and accessibility.

**Keywords:** Entrepreneurship, fiber internet, innovation, social impact, digital transformation.

### 1. Introduction

Digital connectivity has become a fundamental element for the progress of modern societies. In recent years, the rise of fiber optic internet has driven significant changes in the way individuals, businesses, and governments interact in the digital environment. According to Barros (2024, p. 15), “the accelerated digitalization of various sectors has made the internet a basic necessity, directly impacting the economy, communication, and education.” In fact, the ability to transmit information at high speed directly influences productivity, innovation, and business competitiveness.

Fiber optic-based infrastructure stands out for its efficiency, ensuring faster, more stable and accessible connections. According to Costa (2021, p. 80), “fiber optics allows small businesses to reach previously unreachable markets, reducing dependence on physical structures and increasing their competitiveness.” In this way, technology enables a new panorama for entrepreneurship, in which geographical and structural barriers are no longer impediments to the creation and scalability of innovative businesses.

In addition to its impact on the business sector, fiber optics plays a crucial role in digital inclusion and improving the population’s quality of life. Access to information and digital services promotes structural changes in education, the labor market, and digital citizenship. As Santos (2023, p. 60) points out, “democratizing access to the internet enables new educational and professional opportunities, promoting greater social equity.”

This article aims to analyze the impacts of fiber optic internet on digital transformation and the strengthening of innovative and intrepid entrepreneurship. To this end, the main changes driven by this technology will be addressed, with an emphasis on its influence on the economy, the labor market and digital inclusion. The research also discusses the challenges and future prospects for universalizing access to high-speed internet, considering the need for investments in infrastructure and appropriate public policies.

## 2. The Fiber Optic Internet Revolution

Fiber optic internet emerged as a response to the growing demand for faster and more efficient connections. Unlike previous technologies, such as ADSL and coaxial cable, fiber optics uses light beams to transmit data, ensuring greater speed, stability and lower latency.

The growing adoption of fiber optics directly impacts several sectors. According to Silva (2020, p. 25), “the expansion of fiber optic infrastructure in previously isolated communities has been a game changer for economic growth, allowing small businesses to access new markets.”

Furthermore, fiber optic-based infrastructure contributes to digital inclusion. Santos (2023, p. 60) highlights that “the democratization of internet access enables new educational and professional opportunities, promoting greater social equity.”

## 3. Fearless Entrepreneurship in the Digital Age

Entrepreneurs who take risks in search of innovation find fiber optic internet to be an essential pillar for their operations. Business models such as e-commerce, fintechs and edtechs depend directly on advanced connectivity to develop.

Oliveira (2022, p. 92) highlights that “high-speed connectivity enables the creation of disruptive startups, allowing new entrepreneurs to challenge traditional markets and innovate in products and services.”

Digital transformation has also driven new work formats, such as home office and digital nomadism. According to Ferreira (2021, p. 40), “the popularization of teleworking was only possible thanks to the robust fiber optic infrastructure, which ensures efficient communication and agile information sharing between remote teams.”

#### 4. Social and Economic Impacts of Advanced Connectivity

##### 4.1 Education and Professional Training

Fiber optic internet has expanded access to quality education. According to Santos (2023, p. 68), “remote education has ceased to be a secondary alternative and has become a viable and accessible model for millions of students around the world.”

##### 4.2 Teleworking and Digital Economy

The pandemic has accelerated the adoption of home office, and its continuity depends on digital infrastructure. Ferreira (2021, p. 46) points out that “companies that invest in robust connectivity are able to maintain their operations efficiently, regardless of the location of their employees.”

##### 4.3 Digital Inclusion and Citizenship

Access to the internet provides greater social participation and access to digital services. According to Almeida (2020, p. 50), “digital inclusion is a determining factor for social equity, as it allows more people to have access to information, public services and economic opportunities.”

##### 4.4 New Business Development

Connectivity has accelerated the adoption of emerging technologies. As Barros (2024, p. 20) mentions, “fiber optics is the backbone of the new digital economy, enabling innovations based on artificial intelligence, blockchain and augmented reality.”

#### 5. Challenges and Future Perspectives

Despite the advances, challenges such as the high cost of infrastructure and installation in remote areas still limit the universalization of fiber optic internet. Costa (2021, p. 85) states that “investment in public policies and private partnerships will be essential to ensure the expansion of high-speed connectivity.”

The evolution of 5G, combined with the expansion of fiber optics, could lead to a new digital revolution. According to Barros (2024, p. 25), “the future of connectivity will be marked by the convergence between fiber optics and advanced mobile networks, expanding the possibilities for entrepreneurs and society.”

## 6. Conclusion

The digital revolution, driven by fiber optic internet, has radically transformed the way entrepreneurs innovate and position themselves in the market. Access to high-speed connectivity has become an essential factor for global competitiveness, enabling the creation of new business models and expanding economic opportunities. Oliveira (2022, p. 100) emphasizes that “high-speed connectivity is not just a technological tool, but an essential driver for modern entrepreneurship and for the creation of a more dynamic and equitable society.”

In addition to its impact on the business sector, fiber optic internet plays a central role in digital inclusion and improving quality of life. The advancement of this technology has allowed communities previously marginalized in the digital environment to have access to quality education, teleworking, and new means of citizen participation. As Santos (2023, p. 68) points out, “remote education is no longer a secondary alternative and has become a viable and accessible model for millions of students around the world.”

However, despite significant advances, challenges still persist in the universalization of fiber optic internet. Barriers such as the high cost of infrastructure, the difficulty of installation in remote regions, and the need for effective public policies prevent this technology from reaching its full transformative potential. Costa (2021, p. 85) emphasizes that “investment in public policies and private partnerships will be essential to ensure the expansion of high-speed connectivity.”

Given this scenario, it can be concluded that advanced connectivity plays an essential role in economic and social development, serving as a basis for bolder and more innovative entrepreneurship. In order for its impact to be maximized, it is essential that governments, companies and academic institutions join forces to expand access to this infrastructure and foster an environment conducive to innovation.

The future of connectivity points to a convergence between fiber optics and other emerging technologies, such as 5G and artificial intelligence. Barros (2024, p. 25) notes that “the future of connectivity will be marked by the convergence between fiber optics and advanced mobile networks, expanding the possibilities for entrepreneurs and society.” Thus, it is expected that continued technological advancement will provide new opportunities for entrepreneurs and citizens, consolidating the internet as a decisive factor in building a more inclusive, dynamic and innovative future.

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