

# Health entrepreneurship in Brazil: digital transformation, innovation ecosystems and implications for sustainable local development. A narrative review and documentary analysis from a healthcare management perspective

## Abstract

Health entrepreneurship has emerged as a strategic component of socioeconomic development in Brazil, particularly in the context of structural transformations intensified by the COVID-19 pandemic. This study aims to analyze the recent evolution of health entrepreneurship in Brazil from a healthcare management perspective, considering labor market dynamics, digital transformation, innovation ecosystems and the emergence of new business models in health services. Methodologically, the study adopts a qualitative and exploratory approach based on a narrative literature review combined with documentary analysis of secondary data from institutional and scientific sources, including IBGE, GEM, Sebrae, WHO and OECD reports. The findings indicate a gradual transition from necessity-driven entrepreneurship toward opportunity-driven and innovation-oriented initiatives, strongly influenced by telemedicine, digital platforms, data analytics and new forms of service delivery. The results also suggest that health entrepreneurship can contribute to sustainable local development when supported by managerial qualification, institutional coordination, data governance and territorial strategies. The study concludes that health entrepreneurship should not be understood merely as a response to labor market instability, but as a strategic field for innovation, service reorganization and local development in healthcare systems.

**Keywords:** health entrepreneurship, healthcare management, digital health, innovation ecosystems, sustainable local development, health economics

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## Introduction

Entrepreneurship has long been recognized as a central driver of economic, social and territorial development. Since the classical contributions of Schumpeter, the entrepreneur has been understood as an agent of innovation capable of introducing new combinations, disrupting established productive structures and fostering economic transformation. Contemporary approaches, however, have expanded this interpretation by incorporating institutional, technological and territorial dimensions of innovation.

In Brazil, the expansion of entrepreneurship has been strongly associated with structural changes in the labor market, including labor flexibilization, unemployment, informality and the growth of self-employment. These processes were intensified during and after the COVID-19 pandemic, particularly in the service sector, where new forms of work organization and micro entrepreneurship became increasingly relevant. Within this context, the health sector has emerged as a strategic field for entrepreneurial activity. Healthcare is knowledge-intensive, highly regulated and characterized by market failures such as information asymmetry, uncertainty, unequal access and externalities. These characteristics make health entrepreneurship different from entrepreneurship in other economic sectors, since business initiatives in healthcare are directly connected to social needs, public regulation and the quality of life of populations.

More recently, digital transformation has accelerated changes in healthcare delivery. Telemedicine, digital platforms, artificial

intelligence, data analytics and remote monitoring have created new opportunities for entrepreneurs, startups, clinics, cooperatives and service providers. However, these opportunities also require managerial capabilities, regulatory compliance, technological literacy and integration with broader health systems.

Therefore, this article analyzes health entrepreneurship in Brazil from a healthcare management perspective, emphasizing digital transformation, innovation ecosystems and implications for sustainable local development.

## Theoretical framework

### Entrepreneurship, innovation and structural change

The Schumpeterian perspective highlights innovation as the central mechanism of economic development. In this view, entrepreneurship is not limited to opening new businesses, but involves the creation of new products, processes, services, markets and organizational arrangements. However, more recent approaches argue that innovation is not an isolated process. It depends on systems of interaction among firms, public institutions, universities, research centers, governments and civil society. This systemic perspective is particularly relevant to healthcare, where innovation often requires scientific knowledge, regulation, public policy, technological infrastructure and professional qualification.

In the healthcare sector, innovation has increasingly been shaped by digital transformation. Technologies such as artificial intelligence,

data analytics, electronic health records, telemedicine and digital platforms are changing service delivery models and creating new opportunities for entrepreneurial initiatives. These changes reinforce the need to analyze health entrepreneurship not only as an economic phenomenon, but also as an organizational and managerial process.

### **Sustainable local development and territorial dynamics**

Sustainable local development is understood as a socially constructed and territorially embedded process. It depends on the capacity of territories to mobilize local resources, strengthen institutional networks and generate economic and social value. From this perspective, entrepreneurship can contribute to development by creating jobs, generating income, stimulating innovation and strengthening local productive systems. In the health sector, this contribution is even more significant because health services are directly related to social welfare, quality of life and access to essential care. Health entrepreneurship can therefore strengthen local development when it expands access to services, creates local employment, supports prevention and health promotion, and promotes innovation adapted to territorial needs. However, its positive impact depends on public policies, institutional coordination and managerial capacity.

### **Health economics, social innovation and digital ecosystems**

Health economics shows that healthcare markets are marked by specific structural problems, including information asymmetry, uncertainty, unequal access and high regulatory complexity. These characteristics justify the strong presence of the State in regulation, financing and organization of health systems. At the same time, these challenges create opportunities for entrepreneurial initiatives capable of complementing public services, improving access, reducing inefficiencies and introducing innovative solutions. Examples include telemedicine platforms, low-cost clinics, diagnostic services, digital health startups, home care services and preventive care businesses. The emergence of digital health ecosystems has intensified this process. These ecosystems involve interaction among startups, universities, hospitals, clinics, technology companies, public institutions and investors. In this context, the entrepreneur becomes a mediator between technological solutions, market opportunities and social demands.

### **Methodology**

This study adopts a qualitative, exploratory and descriptive approach based on a narrative literature review combined with documentary analysis of secondary data. The methodological design was chosen because the objective is not to test causal hypotheses, but to interpret structural trends, theoretical contributions and managerial implications related to health entrepreneurship in Brazil.

The narrative review focused on literature related to entrepreneurship, innovation systems, health economics, digital health, sustainable local development and healthcare management. The documentary analysis considered institutional reports and secondary data produced by national and international organizations, including the Brazilian Institute of Geography and Statistics, the Global Entrepreneurship Monitor, the Brazilian Micro and Small Business Support Service, the World Health Organization and the Organisation for Economic Co-operation and Development.

The review considered publications and reports from 1997 to 2024, combining classical theoretical contributions with recent studies on

digital transformation and healthcare innovation. The inclusion criteria were: studies and reports addressing entrepreneurship, health services, digital health, innovation ecosystems, healthcare management or sustainable local development. The exclusion criteria were: documents unrelated to health entrepreneurship, publications without analytical contribution to the topic and sources without institutional or scientific credibility.

The analysis was conducted through thematic interpretation, organizing the evidence into five analytical dimensions: labor market transformation, digitalization of health services, innovation ecosystems, managerial implications and sustainable local development.

## **Results and discussion**

### **Health entrepreneurship and labor market transformations**

The findings indicate that health entrepreneurship in Brazil has been influenced by broader changes in the labor market. The expansion of self-employment, micro entrepreneurship and flexible forms of work has created new patterns of professional insertion, especially in the service sector.

In healthcare, this process has involved both necessity-driven and opportunity-driven entrepreneurship. On the one hand, some professionals and small businesses enter the health market due to labor instability and limited formal employment opportunities. On the other hand, the post-pandemic context has also strengthened opportunity-driven initiatives based on innovation, digital services and new care delivery models. This dual movement suggests that health entrepreneurship in Brazil should not be interpreted only as informal or precarious work. It also includes innovative businesses capable of reorganizing services, expanding access and creating new forms of value in healthcare.

### **Digital transformation and new health business models**

The COVID-19 pandemic accelerated the digital transformation of healthcare. Telemedicine, online scheduling systems, digital medical records, remote monitoring, mobile applications and platform-based services became more visible and acceptable to patients, professionals and organizations. This transformation opened space for new business models, including digital health startups, low-cost clinics, hybrid care services, preventive health platforms and technology-based diagnostic services. These initiatives can increase efficiency, expand access and reduce operational barriers, especially in territories with limited availability of traditional health services. However, digital transformation also creates challenges. Health entrepreneurs must deal with data protection, interoperability, professional regulation, service quality and ethical use of technologies. Therefore, managerial qualification becomes essential for the sustainability of health ventures.

### **Innovation ecosystems and territorial development**

Health entrepreneurship depends on innovation ecosystems composed of multiple actors: entrepreneurs, universities, research centers, public agencies, hospitals, clinics, professional associations, investors and technology providers. These ecosystems can strengthen sustainable local development when they connect local needs with technological and organizational solutions. In this sense, health entrepreneurship contributes not only to economic growth, but also to the strengthening of care networks, the generation of qualified

jobs and the expansion of access to health services. The territorial dimension is especially relevant in Brazil, where regional inequalities affect access to healthcare. Entrepreneurial initiatives can help reduce local gaps when aligned with public policies, community needs and institutional support.

### Managerial contribution of health entrepreneurship

From a healthcare management perspective, health entrepreneurship contributes to four main managerial dimensions: service innovation, operational efficiency, strategic coordination and social impact.

The managerial contribution of health entrepreneurship is summarized in Table 1.

**Table 1** Analytical dimensions of health entrepreneurship and managerial implications

Analytical dimension	Main characteristics	Managerial implications
Digital transformation	Telemedicine, digital platforms, data analytics and remote services	Redesign of care processes, operational efficiency and better service accessibility
Innovation ecosystems	Interaction among startups, universities, public sector, private organizations and investors	Strengthening of partnerships, knowledge transfer and collaborative governance
Health economics	Market failures, regulation, information asymmetry and access barriers	Need for strategic planning, cost management and regulatory compliance
Sustainable local development	Income generation, local care networks and social inclusion	Contribution to territorial development and reduction of regional inequalities
Managerial qualification	Planning, financial management, quality control and data governance	Greater sustainability, scalability and organizational maturity of health ventures

**Source:** Prepared by the author.

This table reinforces the central argument of the study: health entrepreneurship is not merely an economic activity, but a managerial and institutional process that requires planning, innovation, governance and integration with healthcare systems.

### Challenges for health entrepreneurship in Brazil

Despite its potential, health entrepreneurship in Brazil faces significant barriers. These include regulatory complexity, difficulty accessing credit, lack of managerial training, technological asymmetries, regional inequalities and limited integration with public health policies. Small businesses and microentrepreneurs are especially vulnerable to these challenges. Many health ventures have technical expertise but lack managerial maturity in areas such as financial planning, strategic management, data governance, marketing, quality control and compliance. Therefore, public policies aimed at health entrepreneurship should go beyond business formalization. They should include managerial education, innovation incentives, access to financing, digital infrastructure and integration with territorial health strategies.<sup>1-19</sup>

### Conclusion

This study analyzed health entrepreneurship in Brazil from a healthcare management perspective, emphasizing digital

transformation, innovation ecosystems and sustainable local development.

The findings indicate that health entrepreneurship has evolved from a predominantly necessity-driven phenomenon toward a more diversified field that includes opportunity-driven and innovation-oriented initiatives. This transformation was intensified by the COVID-19 pandemic, which accelerated digitalization and stimulated new business models in health services.

The article argues that health entrepreneurship should be understood as a strategic field for healthcare management. Its contribution is not limited to income generation or business creation, but includes service innovation, operational efficiency, and expansion of access, territorial development and strengthening of local care systems. However, the sustainability of health entrepreneurship depends on managerial qualification, institutional support, regulatory clarity, data governance and articulation with public policies. Without these elements, entrepreneurial initiatives may remain fragmented, informal or unable to generate long-term social impact.

Future research should explore empirical case studies of health entrepreneurship in different Brazilian regions, with attention to digital health startups, low-cost clinics, cooperative models, telemedicine services and local innovation ecosystems.

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### Ethical approval

This study used only secondary data and publicly available documents; therefore, ethical approval was not required.

### Author contribution

Robson Paz Vieira was responsible for conceptualization, literature review, documentary analysis, writing and final revision of the manuscript.

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### Conflicts of interest

The author declares no conflict of interest.

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