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## A Study On Digital Innovation In India

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### Abstract

Digital technologies contribute to the transformation of large parts of our economy and society. The impact of digital innovation on entrepreneurship and its outcomes within diverse sociopolitical contexts. Results show that improved innovation output scores and the ability to absorb innovative models are associated with higher GDP growth rates. Technological changes account for 35–40% of the dynamics, while regional factors account for 40%. Internet usage has led to decreased operational costs, increased sales, and better customer interaction for 88% of companies, enabling 83% to expand their markets and 78% to engage more effectively with suppliers. Digitalization fosters entrepreneurship expansion into new markets, creating a positive feedback loop between the two variables. Additionally, the study found that government roles have a more significant influence on entrepreneurship sustainability compared to electronic readiness. Digital technologies have been shown to enhance firm productivity, particularly in manufacturing and intensive industries. There is no doubt that digital technologies are spawning ongoing innovation across most if not all sectors of the economy and society. In this essay, we take stock of the characteristics of digital technologies that give rise to this new reality and introduce the papers in this special issue. In addition, we also highlight the unprecedented opportunities that digital innovation provides to study innovation processes more generally. Overall, we conclude that the speed, observability, and relative ease in investigating relationships between multiple analytical levels, mean that digital innovation is both a ‘model of’ that also provides a ‘model for’ the study of innovation processes more broadly in non-digital and hybrid contexts.

**Key Words:** Entrepreneurship, Non-Digital, Digital Technologies, Spawning

### Introduction

Digital innovation is the application and adoption of digital technologies in a strategic manner to improve business operations, create novel products or services, enhance customer interactions, and meet evolving market demands. It's essentially a systemic overhaul that disrupts traditional methods and fosters competitive differentiation. Ideas such as digital transformation and digitization are closely related to the concept of digital

innovation. Digital innovation is facilitated by advanced technologies, including artificial intelligence (AI), big data analytics, and cloud computing. It uses these technological resources to discover new opportunities and fuel growth for businesses or organizations, focusing on making the most of the tools and systems already in place. It's worth remembering that digital innovation isn't just about technology – it's about smartly leveraging technology for maximum benefit. The most successful digital innovators are those who recognize that the competitive landscape is constantly changing and do what they can to stay ahead of the curve. However, it's important to note that digital innovation is an iterative process – a continuous journey of discovery and learning. The only way to keep up with the ever-changing landscape is to remain curious, experiment, and stay open-minded. It's also essential to have the right tools in place to create an environment where digital innovation can flourish.

## Objectives

- To study the importance of Digital Innovation in India.
- To analyse the difference between Digital Innovation and Digital Transformation in India.

## Review of Literature

- **Nambisan (2017)** The millennium, the pervasive adoption of digital technologies and the implementation of digitally enabled infrastructures have fundamentally changed the nature of products and services across most if not all industries. Recent advances in digital technologies (e.g., mobile computing, artificial intelligence, blockchain, virtual and augmented reality, robotics, the Internet of Things, and 3D printing) are fostering dramatic changes in the economy and organisations. A significant driver of these changes is digital innovation, which has been defined as 'the creation of (and consequent change in) market offerings, business processes, or models that result from the use of digital technology.
- **Gradillas and Thomas (2021)** Digital innovations are changing the ways products and services are developed, produced and used. For instance, innovations using digital technologies enable the 'sharing' of inputs or resources, such as cars, tools, and accommodation. Such innovations are disrupting traditional markets, including media and entertainment, automotive rental and sales, hotels and hospitality, and even temporary labour markets. As digital innovation proliferates, there is an increasing array of digital artefacts, which themselves present more opportunities for digitisation and digitalisation. Underpinning this proliferation is the fact that digital products and services continue evolving by gaining new functionality through updates or novel connections with complementary products and services.
- **Vaskelainen (2021)** Challenges also arise as digital technologies not only allow new products and services, but also enable new ways to organise and the potential for new business model innovations some of which are disruptive. For example, by offering actors novel ways to connect through platforms, digital technologies have enabled the emergence of peer-to-peer marketplaces (e.g., Airbnb) and made it possible for B2B lease and rental actors to push for B2C markets. Moreover, due to its characteristics, digital innovation poses a challenge for incumbent firms whose responses can shape industry structure. Incumbent companies often fail to actively exploit the opportunities enabled by digital innovation.

Because many digital innovations require fundamentally different capabilities, many incumbents depend on their collaboration with partners who already possess those capabilities, thereby inducing a change in industry structure. Thus, understanding the emergent opportunities, design criteria, commercialisation challenges, market and industry impacts, and strategic responses to such business model innovation represents a significant managerial challenge.

## Importance of Digital Innovation in India

Organizations face the peril of obsolescence if they fail to implement digital innovation or adjust to the dynamic consumer and business practices. According to a report from Foundry, 89% of organizations intend to adopt a digital-centric business strategy. In an era where developing enterprise-level web and mobile applications no longer necessitates prolonged durations or years of crafting intricate codes, it's a straightforward case of instigating disruption or succumbing to it.



**Digital innovation has emerged as a crucial element in the contemporary business environment, owing to several compelling reasons:**

- **Competitive Differentiation:** Digital innovation serves as a conduit for businesses to establish a robust competitive advantage. Through the strategic deployment of novel technologies, organizations can introduce distinctive products and services that set them apart from the competition, thereby securing a formidable market position.
- **Organizational Effectiveness:** One of the substantial benefits of digital innovation is the enhancement of organizational effectiveness. Organizations can dramatically reduce the time and resources typically required by replacing traditional processes with automated workflows and digital tools, thereby increasing productivity.
- **Advanced Customer Engagement:** Digital innovation plays a pivotal role in enriching the customer experience. Sophisticated tools such as AI-driven chatbots, customized marketing initiatives, and

intuitive mobile applications facilitate more interactive and personalized customer engagements. This not only improves customer satisfaction but also promotes loyalty.

- **Data-Driven Strategic Planning:** The advent of digital innovation introduces businesses to the power of data analytics. By harnessing this capability, organizations can make strategic decisions based on real-time, data-driven insights, enhancing business performance and forecasting accuracy.
- **Innovation Culture:** Digital innovation fosters a culture of continuous improvement and innovation within the organization. It encourages employees to think outside the box, experiment with new ideas, and embrace change, thereby driving innovation at all levels of the organization.
- **Business Model Transformation:** Companies can revolutionize and reshape their business structures through digital innovation. Utilizing digital technologies allows for the creation of fresh revenue avenues, enhancement of service provision, and redefinition of their unique selling proposition.

Digital innovation is not confined to any particular group; it's relevant and beneficial for everyone, from individuals to businesses and even governments.

### For Individuals

- Digital innovation has the power to simplify daily tasks. From online banking to grocery shopping, digital tools have made life more convenient. Furthermore, communication has been enhanced with the advent of social media platforms and instant messaging apps, making it easier than ever to stay connected with friends and family.
- Personal growth is also facilitated through digital innovation. Online learning platforms offer a plethora of courses and resources, allowing individuals to acquire new skills or knowledge from the comfort of their homes.

### For Businesses

- Businesses of all sizes and across all sectors can harness digital innovation to boost operational efficiency. Digital tools can automate repetitive tasks, streamline workflows, and improve data management, thereby increasing productivity and reducing costs.
- Innovation in digital technology also allows businesses to develop new products or services. For example, AI and machine learning can be used to analyze customer behavior and predict market trends, helping companies to stay ahead of the competition.

### For Governments

- Government entities can significantly benefit from digital innovation by improving public service delivery. Digital platforms can make processes like tax filing, license renewals, and applications for public services faster and more efficient.
- Digital innovation also facilitates effective citizen engagement. Social media platforms, mobile apps, and websites allow governments to communicate important information, gather citizen feedback, and foster transparency.

## For the Education Sector

- Digital innovation has revolutionized education by making learning more accessible. Online classes, digital textbooks, and educational apps have broken down geographical barriers, allowing anyone with internet access to pursue learning opportunities.
- It also promotes inclusivity by providing personalized learning experiences to cater to different learning styles and needs. Assistive technologies enable learners with disabilities to participate in educational activities, leveling the playing field for all students.

## Digital innovation Vs digital transformation

Although often used interchangeably, digital innovation and digital transformation represent distinct concepts in the realm of technology. Both are crucial for businesses aiming to enhance their processes and stay competitive in today's digital age.

### Digital Innovation

Digital innovation refers to the creation and implementation of novel digital technologies or the innovative use of existing ones. It involves developing new services, products, or business models that leverage digital technologies.

Digital innovation is a testing ground for new ideas on a smaller scale, providing immediate value and learning opportunities. For instance, a company might innovate by developing a new mobile app to improve customer engagement or utilizing big data analytics to gain insights into market trends.

### Digital Transformation

Digital transformation is a broader, more strategic initiative. It represents a fundamental change in how a business operates, integrating digital technology into all areas of the organization. This process often involves a shift in company culture, requiring businesses to challenge the status quo and experiment with new ways of working. Digital transformation aims to improve the efficiency of business processes, enhance customer experience, and enable new business models. For example, a traditional retail business undergoing digital transformation might transition to an e-commerce model, implementing digital payment systems, online customer service, and digital marketing strategies. The main difference between digital innovation and digital transformation lies in their scope and scale. While digital innovation focuses on specific areas or projects, digital transformation involves a holistic change in the organization's operations and mindset. Businesses can leverage digital innovation and transformation to enhance their technology processes. Digital innovation allows companies to experiment with new ideas and technologies on a smaller scale, learning from the outcomes and gradually implementing successful innovations.

Meanwhile, digital transformation provides a strategic roadmap for comprehensive digital integration, driving long-term growth and competitiveness. Together, they create a dynamic digital ecosystem that fosters continuous improvement and adaptation in the face of technological advancements.

## Three Examples of Digital Innovation in Action

It's easy to get caught up in abstract concepts, so let's look at three real-world examples of digital innovation to bring the idea to life.

**IKEA:** IKEA's innovative approach to digital transformation is showcased through its AR-powered application, IKEA Place. The app, developed using Apple's ARKit framework, allows customers to virtually place life-sized 3D models of IKEA's furniture in their homes. The app uses the device's camera and taps into complex algorithms for depth perception and light estimation, making the virtual furniture appear as realistic as possible within the space. This use of AR technology not only enhances the customer experience by enabling them to visualize products in their environment before buying and helps reduce return rates, driving operational efficiency.

**LEGO:** LEGO's digital transformation strategy bridges the gap between physical and digital play, creating a well-rounded consumer experience. One significant step was introducing the LEGO Tower mobile game, developed in collaboration with NimbleBit. The game leverages the Unity engine for rendering 3D graphics and Firebase for back-end services like authentication, database, and analytics. Additionally, they launched LEGO Fusion, a product line that combines traditional building with interactive mobile gameplay. The Fusion sets include special bricks that can be scanned via an app (using image recognition technology), rendering a digital version of the built structure in the game.

**Starbucks:** Starbucks' digital transformation journey is a testament to how data-driven decision-making can revolutionize a business. A key part of this strategy is their mobile order and pay app, developed using Node.js for the backend and React Native for cross-platform mobile development. This system has not only expedited the ordering process but also generated a wealth of data about customer preferences. Furthermore, they have a sophisticated loyalty program powered by AI and machine learning algorithms, which analyze customers' purchasing habits and personalize marketing campaigns accordingly. This personalization has significantly increased customer engagement and loyalty.

### **The Digital Innovation Supply Chain**

The "Digital Innovation Supply Chain" is a strategic process that guides businesses from the initial idea stage to market release. It encompasses planning, sourcing, development, and distribution, forming the backbone of digital transformation efforts.

**Plan:** This phase involves strategic planning and identification of innovation opportunities. It requires comprehensive market research, technology trend analysis, and alignment of these insights with organizational capabilities.

**Source:** In this phase, businesses procure necessary resources for innovation. This could include acquiring cutting-edge technologies, establishing strategic partnerships, or recruiting talent with specific skill sets.

**Develop:** This stage is characterized by transforming innovative ideas into tangible solutions. It involves technical processes such as software development, prototype creation, system integration, testing, and debugging.

**Distribute:** The final phase involves the delivery of the digital solution to the target market. This includes product deployment, user training, providing post-launch support, and setting up feedback mechanisms for continuous improvement.

## Conclusion

Digital innovation and the challenges entrepreneurs face in a fast-growing digital world offers valuable insights on the relationship between digital innovation and entrepreneurship. These studies span regions around the world and various study fields, which highlights the universal significance of this relationship. Although the small sample size of this narrative study restricts the scope of conclusions drawn, it nonetheless provides a foundation for future research that examines how these trends are replicated in other studies and explores the challenges outlined in this paper in more depth. In particular, examining the impact of the “top technologies” identified by will help paint a more comprehensive picture of how digital innovation is transforming businesses and societies worldwide. These technologies include the Internet of Things, Robotic Process Automation, Artificial Intelligence and Machine Learning, Blockchain Technology, Augmented Reality, Virtual Reality, Networking, Biotech, and On-Demand Marketplace Platforms. Understanding the implications of these technologies is essential to maximizing the benefits of digital innovation.

## References

- Bouwman, H., Nikou, S., Molina-Castillo, F. J., & de Reuver, M. (2018). The impact of digitalization on business models. *Digital Policy, Regulation and Governance*, 20(2), 105–124.
- Abu-Rumman, A., Al Shraah, A., Al-Madi, F., et al. (2021). Entrepreneurial networks, entrepreneurial orientation, and performance of small and medium enterprises: Are dynamic capabilities the missing link? *J Innov Entrep*, 10, 29. <https://doi.org/10.1186/s13731-021-00170-8>
- Carolina, A. (2019). Digital trade in Latin America: Mapping issues and approaches. *Digital Policy, Regulation and Governance*, 21(1), 2–18.
- van der Aalst, W. M. P., Bichler, M., & Heinzl, A. (2018). Robotic process automation. *Business & Information Systems Engineering*, 60, 269–272. <https://doi.org/10.1007/s12599-018-0542-4>