

Digital Entrepreneurship and the Emergence of New Global Business Ecosystems

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Abstract

Digital entrepreneurship has transformed the nature of entrepreneurial activity by enabling individuals and organizations to create, deliver, and capture value through digital technologies, platforms, data, and globally connected networks. The rapid diffusion of cloud computing, artificial intelligence, mobile technologies, digital payments, social media, blockchain, and platform infrastructures has lowered several traditional barriers to entrepreneurship while simultaneously creating new forms of competition and dependency. This study examines the relationship between digital entrepreneurship and the emergence of global business ecosystems through a qualitative and comparative analysis of existing literature. It explores platform entrepreneurship, digital marketplaces, technology-enabled startups, ecosystem participation, digital innovation, cross-border entrepreneurship, and network-based value creation. The analysis suggests that digital entrepreneurship can facilitate rapid internationalization by enabling entrepreneurs to access customers, suppliers, investors, talent, and technological resources across geographical boundaries. Digital business ecosystems further strengthen entrepreneurial opportunities by connecting startups, established firms, technology providers, universities, financial institutions, governments, and consumers. However, ecosystem participation also creates challenges related to platform dependence, cybersecurity, data governance, digital inequality, market concentration, intellectual property, and regulatory fragmentation. The study argues that successful digital entrepreneurs require not only technological knowledge but also ecosystem-building capabilities, strategic flexibility, data literacy, innovation capability, and international market awareness. The study concludes that the future of global entrepreneurship will increasingly depend on interconnected digital ecosystems in which value is created collaboratively rather than exclusively within individual firms.

Keywords: Digital Entrepreneurship, Business Ecosystems, Digital Platforms, Global Entrepreneurship, Digital Transformation, Startups, Innovation, Platform Economy, Digital Innovation, International Entrepreneurship.

1. Introduction

Entrepreneurship has historically involved identifying opportunities, mobilizing resources, developing products and services, and creating value for customers.

Digital technologies have significantly changed each of these activities.

Entrepreneurs can now establish businesses with relatively limited physical infrastructure by using:

- Cloud computing.
- Digital platforms.
- E-commerce.
- Artificial Intelligence.
- Social media.
- Digital payment systems.
- Online marketplaces.
- Software-as-a-Service.
- Data analytics.

This transformation has contributed to the emergence of digital entrepreneurship.

Digital entrepreneurship can be understood as entrepreneurial activity in which digital technologies are central to opportunity recognition, business creation, value creation, or business-model development.

Unlike traditional entrepreneurship, digital entrepreneurship can often operate across geographical boundaries from the beginning.

A small startup may acquire customers in multiple countries, use cloud infrastructure located elsewhere, employ remote workers from different regions, and collaborate with international partners.

This development has contributed to the emergence of global digital business ecosystems.

A business ecosystem consists of interconnected organizations and stakeholders that jointly contribute to value creation.

These ecosystems can include:

Startups + Technology Providers + Platforms + Customers + Investors + Universities + Governments + Suppliers

The increasing importance of such networks means that entrepreneurial success is no longer determined exclusively by internal organizational resources.

The ability to participate in, influence, and create digital ecosystems has become an important strategic capability.

2. Literature Review

2.1 Digital Entrepreneurship

Digital entrepreneurship involves the use of digital technologies throughout entrepreneurial processes.

Digital technologies can influence:

- Opportunity identification.
- Product development.
- Customer acquisition.
- Marketing.
- Financing.
- Distribution.
- Business-model design.

Digital entrepreneurship is therefore broader than simply operating a business online. It involves the transformation of entrepreneurial processes through digital technologies.

3. Digital Business Models

Digital entrepreneurs can develop business models based on:

- Platforms.
- Subscriptions.
- Freemium services.
- Digital marketplaces.
- Advertising.
- Data monetization.
- Software services.
- On-demand services.

These models can scale rapidly because digital products and services can often reach large numbers of customers without proportional increases in physical infrastructure.

4. Globalization of Digital Entrepreneurship

Digital technologies have reduced some barriers to international entrepreneurship.

Entrepreneurs can use online platforms to:

- Find international customers.
- Access global suppliers.
- Recruit remote employees.
- Obtain international investment.
- Conduct digital marketing.
- Deliver digital services globally.

This has contributed to the emergence of born-global businesses that pursue international markets shortly after establishment.

5. Business Ecosystems

A business ecosystem is a network of interconnected organizations whose activities collectively contribute to value creation.

Unlike traditional supply chains, ecosystems are often:

- Dynamic.
- Networked.
- Collaborative.
- Technology-enabled.
- Multi-sided.

A digital ecosystem may contain organizations that compete in some areas while collaborating in others.

For example, technology companies may compete for customers while simultaneously relying on common cloud infrastructure or application ecosystems.

6. Digital Platforms

Digital platforms are central to modern business ecosystems.

They connect different participant groups and facilitate interactions.

Examples of platform participants include:

- Buyers.
- Sellers.
- Developers.
- Service providers.
- Advertisers.
- Content creators.

Platforms can create network effects.

As participation increases, the platform can become more valuable to other participants.

This can create rapid growth opportunities for digital entrepreneurs.

7. Research Objectives

The study aims to:

1. Examine the concept of digital entrepreneurship.
2. Analyse the emergence of global digital business ecosystems.
3. Identify major drivers of digital entrepreneurial growth.
4. Examine the role of digital platforms.
5. Analyse ecosystem-based value creation.
6. Investigate opportunities and challenges for digital entrepreneurs.
7. Examine the influence of AI and emerging technologies.
8. Develop strategic recommendations for digital entrepreneurs.

8. Research Methodology

This study uses a qualitative, descriptive, and comparative methodology based on secondary research.

Academic literature related to digital entrepreneurship, digital platforms, entrepreneurial ecosystems, business-model innovation, digital transformation, and international entrepreneurship is examined.

The analysis focuses on five major dimensions:

1. Digital opportunity recognition.
2. Digital business-model innovation.
3. Ecosystem participation.
4. Global market access.
5. Digital resource mobilization.

These dimensions are examined in relation to entrepreneurial outcomes including innovation, scalability, market expansion, competitiveness, and business resilience.

9. Digital Opportunity Recognition

Digital technologies create new opportunities by generating new markets, customer needs, and methods of delivering services.

Entrepreneurs can identify opportunities through:

- Social-media trends.
- Search behaviour.
- Customer analytics.
- Online communities.
- Emerging technologies.
- Platform data.

For example, entrepreneurs may identify underserved customer segments by analysing online behaviour.

10. Digital Innovation

Digital innovation can involve:

- New digital products.
- New services.
- New processes.
- New business models.
- New customer experiences.

Because software can be modified relatively quickly, digital entrepreneurs can experiment with different value propositions.

This supports rapid iteration.

11. Digital Platforms and Entrepreneurial Opportunities

Platforms can reduce market-entry barriers.

A small entrepreneur can use an established digital platform for:

- Customer acquisition.
- Payment processing.
- Advertising.
- Distribution.
- Logistics.

This allows entrepreneurs to focus on product and customer value without developing every supporting infrastructure internally.

However, dependence on platforms can create strategic risks.

Platform owners can change:

- Fees.
- Algorithms.
- Rules.
- Visibility mechanisms.
- Access conditions.

Therefore, entrepreneurs should avoid excessive dependence on a single platform.

12. Global Digital Marketplaces

Digital marketplaces connect entrepreneurs with international customers.

Such marketplaces can provide:

- Market visibility.
- Payment infrastructure.
- Customer reviews.
- Logistics integration.
- Cross-border transactions.

This can allow small businesses to enter global markets with relatively limited physical presence.

13. Social Media Entrepreneurship

Social media has become an important entrepreneurial infrastructure.

Entrepreneurs can use social networks for:

- Brand building.
- Customer engagement.
- Market research.
- Product promotion.
- Community development.
- Influencer partnerships.

The boundary between marketing and entrepreneurship has therefore become increasingly blurred.

14. Artificial Intelligence and Digital Entrepreneurship

AI is increasingly influencing entrepreneurial activities.

Potential applications include:

- Market research.
- Customer segmentation.
- Content generation.
- Product personalization.
- Demand forecasting.
- Chatbots.
- Business-process automation.

Generative AI can also reduce the time required to develop prototypes and marketing materials.

However, entrepreneurs must evaluate issues related to:

- Accuracy.
- Intellectual property.
- Data privacy.
- Algorithmic bias.
- Security.

15. Cloud Computing and Startup Development

Cloud computing has significantly reduced the infrastructure requirements for digital startups.

Entrepreneurs can access:

- Computing power.
- Storage.
- Databases.
- AI services.
- Development environments.

on demand.

This creates a more flexible cost structure.

Instead of purchasing large amounts of infrastructure before obtaining customers, startups can scale infrastructure as demand increases.

16. Digital Financing

Digital technologies have created new financing mechanisms.

These include:

- Online lending.
- Digital banking.
- Crowdfunding.

- Fintech platforms.
- Online investment networks.

Digital financing can expand entrepreneurial access to capital, although financial inclusion remains uneven across countries and regions.

17. Global Talent Ecosystems

Digital entrepreneurship increasingly allows organizations to recruit talent internationally. Remote work platforms enable startups to access:

- Software developers.
- Designers.
- Marketing professionals.
- Data scientists.
- Consultants.

This can allow small firms to access specialized expertise without maintaining large physical offices.

18. Digital Entrepreneurial Ecosystems

A digital entrepreneurial ecosystem can be represented as:

Entrepreneurs ↔ Digital Platforms ↔ Customers ↔ Investors ↔ Technology Providers ↔ Universities ↔ Governments

Each participant contributes different resources.

For example:

- Investors provide capital.
- Universities provide knowledge.
- Platforms provide infrastructure.
- Customers provide demand.
- Governments provide regulatory and institutional support.

The interaction among these participants creates ecosystem-level value.

19. Table

1. Components of Digital Business Ecosystems

Ecosystem Component	Primary Contribution
Entrepreneurs	Innovation and opportunity creation
Digital Platforms	Market coordination
Technology Providers	Digital infrastructure
Investors	Financial capital

Ecosystem Component	Primary Contribution
Customers	Demand and feedback
Universities	Knowledge and research
Suppliers	Resources and capabilities
Government	Regulation and support
Online Communities	Knowledge and network development

20. Network Effects

Network effects are an important characteristic of digital ecosystems.

The value of a platform may increase as more participants join.

For example:

More Sellers → More Product Variety → More Customers → More Sellers

This creates a reinforcing growth cycle.

However, strong network effects can also result in market concentration.

Dominant platforms may become difficult for new competitors to challenge.

21. Ecosystem Value Creation

Traditional businesses often create value primarily through internal activities.

Digital ecosystems create value through interconnected activities.

For example:

Technology Provider + Platform + Entrepreneur + Customer

can jointly create a digital service.

This changes the strategic role of the entrepreneur.

Entrepreneurs increasingly need to manage relationships with external ecosystem participants rather than relying exclusively on internal capabilities.

22. Internationalization of Digital Startups

Digital entrepreneurs can internationalize through several pathways:

Digital Exporting

Selling digital products internationally.

Platform Internationalization

Using global digital platforms to reach customers.

Remote Service Delivery

Providing professional or technological services internationally.

Strategic Partnerships

Collaborating with international firms.

Digital Ecosystem Participation

Joining global technology ecosystems.

These pathways can accelerate international market entry.

23. Data as an Entrepreneurial Resource

Data has become a strategically important entrepreneurial resource.

Organizations can use data to:

- Understand customers.
- Improve products.
- Predict demand.
- Personalize services.
- Identify market opportunities.

However, data-driven entrepreneurship requires responsible data governance.

Entrepreneurs must consider:

- Privacy.
- Consent.
- Security.
- Data ownership.
- Regulatory compliance.

24. Digital Entrepreneurship and Innovation Capability

Digital entrepreneurship and innovation are closely connected.

Entrepreneurs can use digital technologies to:

- Develop prototypes faster.
- Test market assumptions.
- Collect customer feedback.
- Modify products.
- Scale successful solutions.

This supports an iterative entrepreneurial process.

Idea → Prototype → Market Test → Feedback → Modification → Scale

25. Data Analysis

The comparative analysis indicates that digital entrepreneurship can generate significant advantages in scalability, market reach, innovation speed, and resource access.

However, the benefits depend on the quality of the ecosystem in which entrepreneurs operate. Entrepreneurs in regions with strong digital infrastructure, financial systems, educational institutions, and technology networks may have greater opportunities than those operating in digitally underserved environments.

Therefore, digital entrepreneurship is influenced not only by individual entrepreneurial capabilities but also by broader institutional and ecosystem conditions.

Table 2. Illustrative Potential Contributions of Digital Ecosystems

Dimension	Illustrative Contribution (%)
Global Market Access	94
Innovation Speed	92
Business Scalability	95
Access to Digital Resources	91
Customer Engagement	93
Entrepreneurial Collaboration	89
Access to Global Talent	87
New Business-Model Development	92

Note: These percentages are illustrative analytical indicators for conceptual comparison and are not empirical measurements from a specific entrepreneurial sample.

26. Challenges

26.1 Platform Dependence

Entrepreneurs may become dependent on dominant digital platforms.

26.2 Market Concentration

Large platforms can dominate digital ecosystems.

26.3 Cybersecurity

Digital businesses face cyberattacks and data breaches.

26.4 Data Privacy

Global data operations create complex privacy challenges.

26.5 Regulatory Fragmentation

Different countries have different digital regulations.

26.6 Digital Inequality

Not all entrepreneurs have equal access to technology.

26.7 Intellectual Property

Digital products can be copied rapidly.

26.8 Talent Competition

Highly skilled digital workers are in global demand.

27. Digital Entrepreneurship in Emerging Economies

Digital technologies can create significant opportunities in emerging economies.

Entrepreneurs can use mobile technology, digital payments, and online platforms to overcome limitations associated with traditional physical infrastructure.

Digital entrepreneurship can support:

- Financial inclusion.
- Youth entrepreneurship.
- Rural business development.
- Women-led entrepreneurship.
- Local innovation.
- International service exports.

However, digital infrastructure, digital skills, and access to finance remain important constraints.

28. Sustainability and Digital Entrepreneurship

Digital entrepreneurship can contribute to sustainability through:

- Dematerialized services.
- Remote work.
- Digital education.
- Resource optimization.
- Circular-economy platforms.
- Shared-access models.

However, digital entrepreneurship also creates environmental costs through energy consumption, electronic devices, data centres, and electronic waste.

Therefore, entrepreneurs should incorporate sustainability into business-model design.

29. Strategic Capabilities of Digital Entrepreneurs

Successful digital entrepreneurs increasingly require:

1. Digital literacy.
2. Strategic thinking.
3. Innovation capability.
4. Data literacy.
5. Customer orientation.
6. Ecosystem management.
7. International market knowledge.
8. Adaptability.
9. Cybersecurity awareness.
10. Responsible technology governance.

Technical knowledge alone is insufficient.

Entrepreneurs must understand how technology interacts with markets, institutions, customers, and ecosystems.

30. Future Directions

30.1 AI-Native Entrepreneurship

Future startups may be designed around AI from their foundation rather than adding AI later.

30.2 Autonomous Digital Businesses

AI agents may increasingly automate customer support, marketing, analysis, and selected operational functions.

30.3 Global Micro-Multinationals

Small companies may increasingly operate internationally from their earliest stages.

30.4 Decentralized Digital Ecosystems

Blockchain-based systems may enable new forms of ownership and coordination.

30.5 Digital Public Infrastructure

Digital identity, payments, and public digital services may support entrepreneurial participation.

30.6 Ecosystem-Based Competition

Competition may increasingly occur between ecosystems rather than individual companies.

31. Managerial and Entrepreneurial Recommendations

Digital entrepreneurs should:

1. Identify problems before selecting technologies.
2. Build scalable digital infrastructure.
3. Diversify customer-acquisition channels.
4. Avoid excessive dependence on a single platform.
5. Develop strong data-governance practices.
6. Invest in cybersecurity.
7. Build partnerships within relevant ecosystems.
8. Develop international market capabilities.
9. Use AI strategically rather than merely following trends.
10. Protect intellectual property.
11. Develop continuous-learning capabilities.
12. Incorporate sustainability into business-model design.

32. Questionnaire

5-Point Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree

No.	Statement
1	Digital technologies create new entrepreneurial opportunities.
2	Digital platforms reduce barriers to market entry.
3	Digital entrepreneurship facilitates international market expansion.
4	Digital ecosystems improve access to resources and capabilities.
5	AI can strengthen entrepreneurial innovation.
6	Digital platforms improve customer access and engagement.
7	Ecosystem partnerships are important for digital startup growth.
8	Platform dependence creates risks for digital entrepreneurs.
9	Digital skills are essential for entrepreneurial success.
10	Digital entrepreneurship will become increasingly important in the global economy.

33. Discussion

The study demonstrates that digital entrepreneurship is transforming the traditional entrepreneurial process.

Entrepreneurs increasingly rely on digital technologies not simply as operational tools but as fundamental components of their business models.

The emergence of global business ecosystems is particularly significant.

Traditional businesses often competed through control over physical assets, distribution networks, and internal resources.

Digital businesses can instead compete through networks, platforms, data, communities, and ecosystem relationships.

This creates new opportunities for entrepreneurs.

A startup may not need to own manufacturing facilities, distribution networks, or large physical offices to operate internationally.

Instead, it can access these capabilities through digital ecosystems.

However, ecosystem participation creates new dependencies.

Entrepreneurs may become dependent on dominant platforms for customer access, payments, advertising, or distribution.

Therefore, ecosystem strategy should involve both participation and strategic independence.

The findings suggest that future digital entrepreneurs will need to become ecosystem orchestrators, capable of coordinating customers, technology providers, partners, investors, employees, and other stakeholders.

34. Conclusion

Digital entrepreneurship has become an important force in the transformation of the global economy.

The combination of digital platforms, cloud computing, AI, mobile technologies, digital payments, data analytics, and online networks has created new opportunities for entrepreneurs to develop scalable and internationally oriented businesses.

At the same time, the emergence of global digital ecosystems has transformed the competitive environment.

Entrepreneurial success increasingly depends on access to networks, knowledge, digital infrastructure, talent, capital, and customers.

The study concludes that digital entrepreneurship should therefore be understood not simply as the creation of technology-based businesses but as a broader transformation in how entrepreneurial opportunities are identified, resources are mobilized, and value is created.

The future global economy is likely to become increasingly ecosystem-driven, with entrepreneurs operating across organizational and geographical boundaries.

Those entrepreneurs who can combine digital capabilities, innovation, ecosystem participation, strategic flexibility, responsible data management, and international market awareness will be better positioned to create sustainable businesses in the emerging global digital economy.

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