The Role of Financial Digitalisation and Artificial Intelligence (AI) in SME Entrepreneurship and Innovation

Exploring Opportunities, Challenges, and Case Studies from Asia and the Pacific

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Session Agenda

Introduction to the CCAF

SMEs and Digital Finance

Digitalisation of SMEs and AI Opportunities/Risks

Recommendations

Conclusion and Q&A

The Cambridge Centre for Alternative Finance (CCAF)

Mission	To create and transfer knowledge addressing **emergent gaps in the financial sector in order to support evidence-based decision-making** by market participants, regulators and related stakeholders

- Established in January 2015 at the University of Cambridge Judge Business School (CJBS)

- Core activities: 1) **Research** (60+ publications); 2) **Digital Tools** (ccaf.io); 3) **Capacity Building & Education** (trained over 2000 financial regulators & supervisors)

- Supported by more than 60 full-time and part-time staff, fellows, research fellows and affiliates globally

- 35+ funders including the UK FCDO, Gates Foundation, World Bank, BIS, Invesco, London Stock Exchange Group, Visa, Mastercard, Goldman Sachs, Fidelity, EY, KPMG, Accenture and MSCI etc.

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CCAF FinTech Innovation Programmes

Cambridge Fintech & Regulatory Innovation (CFTRI)

Exploring the most relevant emergent business & technological innovations in finance & the requisite regulatory responses

Cambridge Digital Assets for Regulators & Non-Regulators

Detailing the fundamentals & evolution of digital assets and blockchain technology from the perspective of regulatory & supervisory implications

SupTech Lab Programmes:

SupTech Frontiers

Data Science

Product & Organisation Innovation

Establishing & empowering a community of leaders who are re-architecturing financial supervision through change management, data, product and organisational innovation
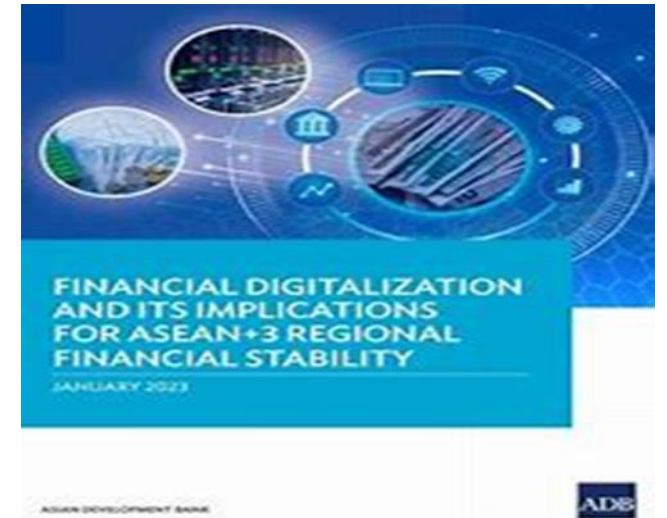
Cambridge Open Banking & Open Finance Programme

Focus on the policy, regulatory, supervisory, governance, implementation aspects of open banking and open finance approaches and frameworks

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SME/Financial Digitalisation/AI

Definition of SMEs	→	SME digital transformation is a key driver of innovation and entrepreneurship.	→	Financial digitalisation and AI are enabling small businesses to enhance productivity, streamline operations, and expand market reach

Financial Digitalisation

The Asian Development Bank's 2023 report on " Financial Digitalisation and Its Implications for ASEAN+3 Regional Financial Stability" explored the impact of digitalisation on financial stability within the ASEAN+3 region. The report examined the trends, opportunities, risks, and regulatory challenges associated with the rapid digital transformation of financial services.

Source:

Digitalisation Trends in ASEAN+3

1. High Internet Penetration

The region has experienced significant growth in digital financial services, driven by widespread internet access.

2. Mobile Device Usage

Increased use of smartphones and tablets has facilitated the adoption of digital financial services.

3. Digital Wallet Dominance

Digital wallets have become a prevalent payment method, with usage expected to continue rising.

4. Decline of Physical Banking

Traditional banking is transforming, with fewer physical branches and ATMs as consumers shift to mobile banking and digital payments.

Opportunities of Digital Financial Services

1.Cost Reduction Digital financial services offer significant cost savings for both providers and consumers.	2.Increased Efficiency Digital platforms streamline financial transactions and processes, improving overall efficiency.
3.Enhanced Customer Reach Digital services allow financial institutions to reach a broader customer base, including previously underserved populations.	4. Financial Inclusion Digital financial services promote access to financial services in underserved regions, fostering greater financial inclusion.

Risks Associated with Financial Digitalisation

Cybersecurity Threats	Regulatory Challenges	Cross-Border Instability
The increased reliance on digital platforms exposes financial systems to potential cyber attacks and data breaches.	Existing regulations may struggle to keep pace with rapidly evolving digital financial services and technologies.	The ease of cross-border digital services may introduce new sources of financial instability and regulatory complexity.

OECD Report on Digital Transformation of SMEs

An OECD report, *The Digital Transformation of SMEs*, provides an in-depth analysis of how small and medium-sized enterprises (SMEs) are adapting to digital technologies, the barriers they face, and the policy initiatives that can support their digital transformation. [The Digital Transformation of SMEs | OECD](#)

The report highlights the need for tailored policy interventions to enable SMEs to fully leverage digital technologies, including AI, and compete on an equal footing with larger firms.

Case Studies: Israel and South Korea

Israel: Blockchain for SME Growth and Security	South Korea: Promoting AI and Digital Transformation for SMEs
Context: Israel has fostered a thriving blockchain ecosystem, encouraging its use among SMEs for secure transactions and enhanced transparency. **Key Initiatives**: Development of blockchain-based solutions for supply chain management, financial transactions, and secure data sharing. Establishment of innovation labs and co-working spaces that focus on blockchain technologies. **Impact**: SMEs that adopted blockchain reported a 30% reduction in transaction costs and a 20% increase in customer trust.	**Context**: South Korea has emerged as a leader in digital innovation, with a particular focus on integrating AI into business operations. **Key Initiatives**: Government-supported AI training programmes aimed at building digital competencies within SMEs. Establishment of AI business support centers that provide SMEs access to AI tools and expertise. Financial incentives, such as tax relief and subsidies, specifically for SMEs adopting digital technologies. **Impact**: Over 60% of participating SMEs reported improved productivity and the ability to develop new products and services, demonstrating the tangible benefits of digital adoption.

Case Studies: Italy and UK

Italy: Digital Platforms for SME Export and Trade

Context: Italy has utilized digital platforms to help its SMEs expand their market reach, especially in traditional industries like fashion and manufacturing.

Key Initiatives:

Government-backed initiatives to support SMEs in integrating with digital export platforms.

Provision of training and consulting services to enable digital marketing and e-commerce adoption.

Impact: SMEs using these platforms saw a 40% increase in exports and were able to enter new international markets.

United Kingdom: Supporting Rural SMEs through Digital Adoption

Context: The UK has implemented targeted digital policies to support rural SMEs, which often face unique challenges related to infrastructure and digital skills.
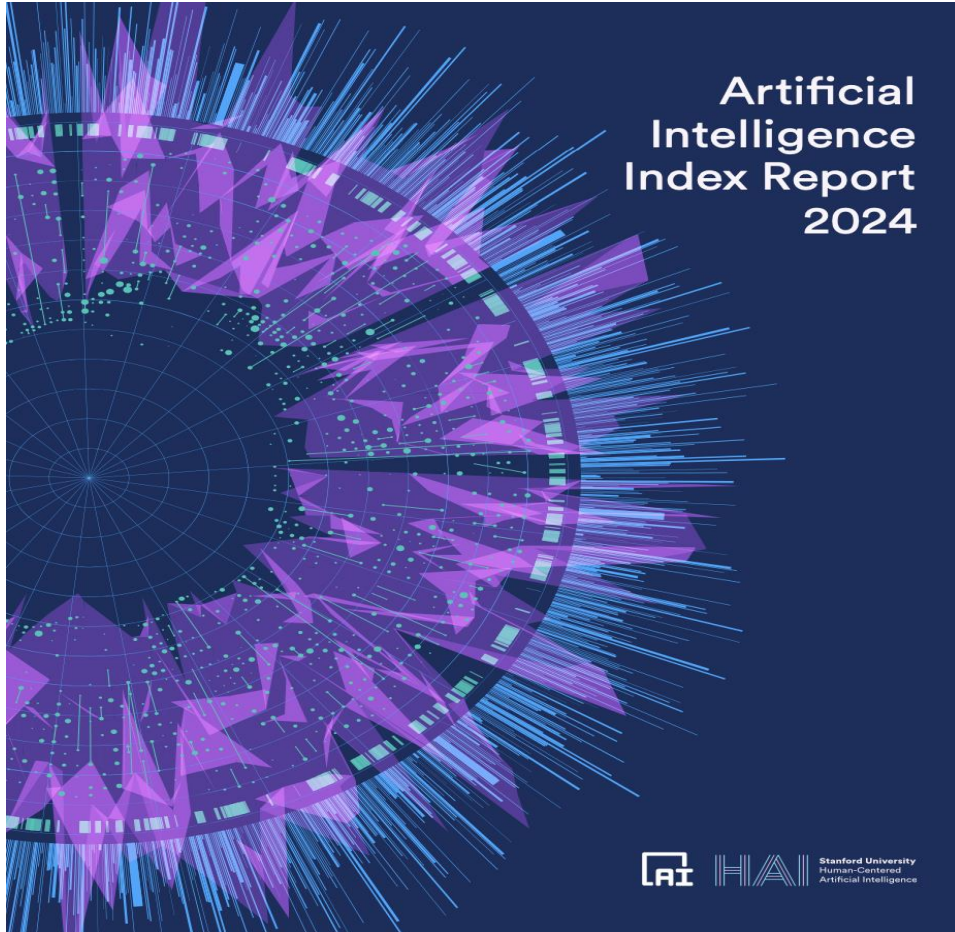
Key Initiatives:

Development of rural broadband initiatives to enhance connectivity for remote businesses.

Creation of digital support hubs that provide training and mentoring for digital adoption.

Impact: Over 70% of participating rural SMEs reported increased online sales and improved operational efficiency.

Some Insights on AI

Artificial Intelligence Index Report 2024
Stanford University Human-Centered Artificial Intelligence

The Artificial Intelligence Index Report 2024 provides a comprehensive overview of AI's current state and future trajectory.

The report highlights significant developments in AI capabilities, research, investment, and societal impact.

Source: HAI_AI-Index-Report-2024.pdf (stanford.edu)

AI Performance: Triumphs and Challenges

Image Classification and Visual Reasoning

AI has surpassed human performance on several benchmarks, including image classification and visual reasoning tasks.

English Understanding

AI models have demonstrated superior performance in English language comprehension compared to humans.

Complex Tasks

AI still lags behind humans in areas such as competition-level mathematics, visual commonsense

Global Leadership in AI Model Development

United States

Leading the pack with 61 notable AI models originating from U.S.-based institutions in 2023.

European Union

Produced 21 notable AI models, securing the second position in global AI development.

China

Contributed 15 notable AI models, demonstrating its growing presence in the field.

Generative AI Investment Surge

Overall AI Investment Decline

Despite a decline in overall AI private investment last year...

Generative AI Funding Boom

Funding for generative AI surged, reaching $25.2 billion.

Major Players' Fundraising

OpenAI, Anthropic, Hugging Face, and Inflection reported substantial fundraising rounds.

What are the Benefits of AI for SMEs

- **Efficiency and Productivity:** By automating repetitive tasks, AI reduces operational costs and improve efficiency.

- **Enhanced Decision-Making:** By providing insights through data analytics, AI allow SMEs to make informed business decisions

- **Improved Customer Service:** Using AI-driven chatbots and virtual assistants enable 24/7 customer support, enhancing customer experience.

- **Market and Customer Outreach:** AI-powered tools help SMEs target potential customers more effectively and expand their market reach.

Challenges with AI

- Bias and Discrimination

- Job Displacement

- Privacy Concerns

- Data Issues

- Lack of Standardisation

- Lack of Transparency

- Accountability and legal issues

- Security Risks

- Ethical Concerns

- Environmental, Social and Cultural Impact

Addressing these challenges requires a multi disciplinary approach involving technologists, regulators, policymakers and other stakeholders to ensure that AI is developed and used in ways that are beneficial and fair to all.

Financial Crimes and AI Risks

AI is increasingly leveraged in financial crime due to its ability to automate and enhance various activities and key areas of concern include:

- Money Laundering

- Terrorist Financing

- Insider Trading and Market Manipulation

- Cybercrime

- Fraudulent Investment schemes

- Identity Theft and Account Takeover

- Fraud

Fraud- Example

Deepfake CFO tricks Hong Kong biz out of $25 million

Recordings of past vidchats suspected as source of fakery – so there's another class of data you need to lock down

Laura Dobberstein   Mon 5 Feb 2024 // 06:30 UTC

A Hong Kong-based finance professional at a multinational was reportedly swindled out of $25 million (HK$200 million) of company money when scammers created a deepfake of his London-based chief financial officer in a video conference call.

The Hong Konger joined a vidchat in which his CFO appeared – but appeared a little off. So much so that the employee was initially suspicious. But his nerves were soothed as other colleagues he recognized appeared to join in on the call, the Hong Kong police reportedly explained.

The fake CFO made increasingly urgent entreaties to execute money transfers, and the victim complied with instructions given during the call – eventually making 15 transfers into five local bank accounts.

The AI-generated videos were reportedly created from past genuine online conferences. To add depth and credibility to the scam, the perpetrators utilized WhatsApp, email and one-to-one video conferences with Hong Kong staff members.

https://www.theregister.com/2024/02/05/hong_kong_deepfaked_cfo/

Summary: Challenges and Opportunities of Digitalisation and AI

Challenges	Opportunities
Data quality and management	Enhanced risk management
Regulatory compliance	Business Growth
Skills and expertise gaps	Operational efficiency
Ethical and bias issues	Enhanced customer experience
Cybersecurity concerns	Financial inclusion

Importance of Capacity Building, Education and Collaboration

Continuous Learning

Encourage ongoing education and adaptation to new technologies

Knowledge Sharing Platforms:

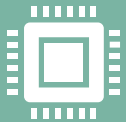Development of platforms for knowledge sharing

Regional & Global Cooperation

Facilitate regional and international forums to exchange best practices and insights

Conclusions /Discussions

SME digital transformation is a key driver of innovation and entrepreneurship

Financial digitalisation and AI are enabling small businesses to enhance productivity, streamline operations, and expand market reach

For SMEs to achieve the benefits of digitalization, concerted efforts are required from all stakeholders to build the necessary infrastructure, develop supportive policies, and provide adequate funding and resources to SMEs