



COMPARATIVE STUDY OF AI STARTUP ECOSYSTEMS IN JAPAN AND THE UK

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INTRODUCTION

- AI as a key indicator of national competitiveness
- Growing global investment in AI ecosystems
- Research motivation: Why compare Japan and UK AI ecosystems?
- Gap in literature: Focus on non-US tech powerhouses

Keywords:

AI innovation, AI ecosystem, business ecosystem, startup ecosystem, comparative analysis, Japan-UK comparison, interviews, coding analysis, thematic analysis.

RESEARCH GAP & PURPOSE

- Provides the first comprehensive comparative analysis of AI startup ecosystems between Japan and the UK, offering insights into how different cultural, institutional, and market contexts shape AI innovation;
- Develops a novel analytical framework for evaluating AI startup ecosystems across six dimensions, enabling systematic cross-national comparison;
- Identifies specific barriers and enablers in both ecosystems through primary interview data with AI startup founders and executives;
- Offers evidence-based recommendations for policymakers and practitioners to enhance AI startup ecosystem development in both countries;
- Challenges the "Silicon Valley-centered" view of AI innovation by demonstrating how countries can develop successful AI ecosystems aligned with their unique strengths.

LITERATURE REVIEW - EVOLUTION OF ECOSYSTEM THEORIES

- From Moore's (1993) business ecosystem concept to modern frameworks
- Lansiti & Levien's (2004) ecosystem health metrics: productivity, robustness, niche creation
- Isenberg's (2011) six-domain entrepreneurial ecosystem framework
- Spiegel's (2017) integration of cultural, social, and material attributes
- Limitations in traditional theories when applied to AI domains:
- Underestimation of dynamic, non-linear relationships (Roundy & Bayer, 2019)
- Geographic constraint assumptions challenged by digital networks (Acs et al., 2017).

LITERATURE REVIEW - UNIQUE CHARACTERISTICS OF AI STARTUP ECOSYSTEMS

- Heightened platform dependency and data-centric nature (Iansiti & Lakhani, 2020)
- Distinctive innovation patterns: disruptive vs. incremental improvement
- Technology-intensive rather than capital-intensive resource requirements
- Novel ethical considerations and regulatory challenges (Cusumano et al., 2021)
- Accelerated development cycles not captured by traditional ecosystem models
- Data network effects, algorithmic governance, and platform-based value creation

LITERATURE REVIEW - CURRENT UNDERSTANDING OF JAPAN AND UK AI LANDSCAPES

Japan: Strong corporate partnerships and practical implementation focus

- Paradox of conservative investment practices with accessible AI funding (Ryan, 2024)
- Evolving governance through strategic initiatives and cross-ministerial collaboration
- Limited empirical research on AI-specific startup dynamics

UK: Research-oriented, internationally focused ecosystem

- World-class universities and strong government support (Westgarth et al., 2022)
- National AI Strategy promoting ethical development
- Diverse sectors: healthcare, finance, manufacturing
- Concentration in innovation hubs: London, Cambridge



METHODOLOGY

Mixed-methods approach combining:

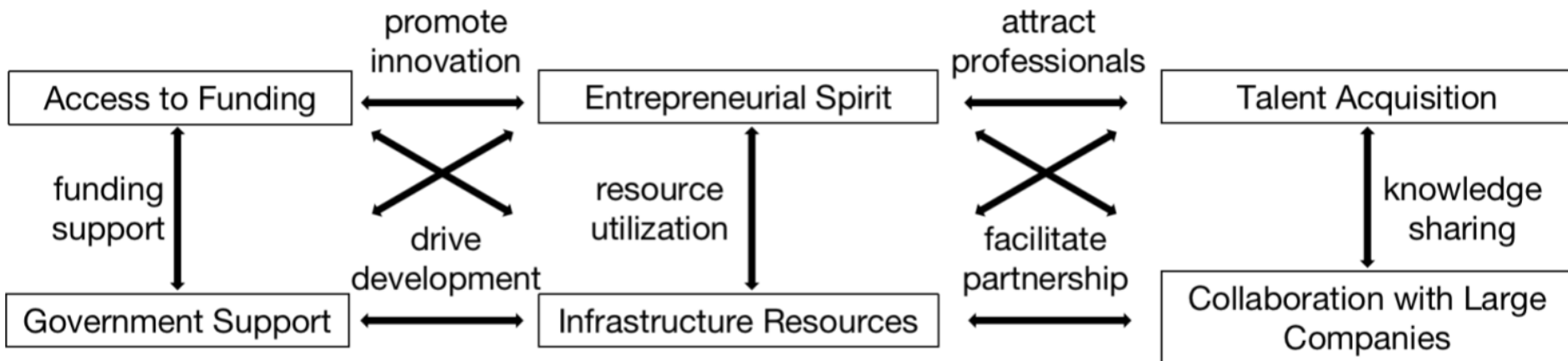
- Secondary research analysis
- Primary data from 10 AI startups (5 from each country)
- Semi-structured interviews with founders/executives
- Systematic coding and thematic analysis to identify patterns

SIX-DIMENSIONAL AI ECOSYSTEM ANALYTICAL FRAMEWORK

Six dimensional analysis of AI startups:

- 1. Access to Funding
- 2. Entrepreneurial Spirit
- 3. Talent Acquisition
- 4. Government Support
- 5. Infrastructure Resources
- 6. Collaboration with Large Companies

SIX- DIMENSIONAL AI ECOSYSTEM ANALYTICAL FRAMEWORK



CASE STUDY SELECTION

TABLE 1 *
Overview of 5 Selected Japanese AI Startup Companies

Company	Establishment	Capital	Employees	Revenue	Business Focus
J-A	2021	¥100M	~150	¥1.5B	AI-powered BX platform, chatbots, e-commerce solutions
J-B	2012	¥100M	9 (+11 contractors)	¥200M	Baby tech, AI cry analysis, parenting apps
J-C	2017	¥17.85B (Funding Amount)	650	N/A	Legal tech, AI contract review, legal process automation
J-D	2020	¥182M	~60	N/A	Sustainability solutions with AI, consulting
J-E	2005	¥378M	200	¥2.3B	AI/DX solutions, TSE listed, enterprise services

TABLE 2 *
Overview of 5 Selected UK AI Startup Companies

Company	Establishment	Capital	Employees	Revenue	Business Focus
UK-A	2023	£50K	5	£30K	AI education, course development
UK-B	2021	£750K	10	£200K	AI for carbon emission tracking in construction
UK-C	2004	£20M	400	£80M	AI-driven network automation
UK-D	2013	£600K	10	£1.5M	AI software testing platforms
UK-E	2005	£15M	100	£10M	AI IT infrastructure monitoring

DATA COLLECTION

Interview Records for Each Company

Interview Record

Client: Company J-A

Attendee: Founder & CEO

Date: October 9, 2024, 10:00 AM - 11:00 AM

Interviewer: Subaru Tomita

Location: ZOOM

Content:

Business Description

Company J-A started as an advertising agency for American internet and social network services, and developed a brand experience (BX) platform, which was released in 2018. By 2021, the number of users of this service surpassed 700 companies. These services are collectively designed to maximize LTV (Lifetime Value) by enhancing brand experiences, with targeting models based on performance. They capture even minor triggers, analyze the data, and react to optimally approach customers. They create interactive brand experiences, helping customers deepen their understanding and become fans. The goal is to improve CVR (conversion rate) and LTV. The services include:

1. An AI-powered chatbot that automates online customer interactions.
2. A payment chat form.
3. Providing payment forms for e-commerce sites with inadequate usability.
4. 1-on-1 communication support.
5. The world's first automated chatform generation service.
6. A service for reducing churn rates.

The AI used in point 1 uses generative AI combined with client company data to automate online customer interactions. The service uses open-source AI algorithms from a major U.S. IT company. Most of their customers are in e-commerce, but they also serve businesses that acquire customers through the internet.

Established: 2020

Capital: 100 million yen

Employees: Approximately 150

Location: Shibuya-ku, Tokyo

Revenue: Approximately 1.5 billion yen

Interview Questions:

1. Access to Funding

- How would you compare the ease of obtaining funding from banks, venture capitalists, angel investors, or other financial institutions for your AI startup?

In 2021, we raised 600 million yen in Series A funding, and in 2023, we raised 2 billion yen in Series B funding, totaling 2.6 billion yen in equity financing. After the fundraising,

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2. Entrepreneurial Spirit

- How would you describe the general perception of entrepreneurship in Japan/UK, particularly in the AI sector?

Japanese people have a positive outlook on AI. I believe AI will resonate well with the Japanese. As seen in anime, there is a cultural acceptance of intangible things. A growing number of young AI startups are emerging, and more people are taking on challenges. In this regard, Japan compares favorably with other countries.

- In your experience, how tolerant is the business environment in Japan/UK towards risk-taking and potential failure?

Large Japanese corporations have a very low tolerance for failure. They only accept extremely low failure rates. For example, large companies tend to demand a success rate of 99.9% for a service.

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3. Talent Acquisition

- What has been your experience in attracting and retaining talented management team members and engineers for your AI startup in Japan/UK?

I happened to meet our CTO by chance, and his presence has been significant. Having someone like him, who already had expertise in AI, has been a major plus. He became one of the three Japanese partners of a major U.S. IT company. When it comes to generative AI, our CTO has built a strong reputation in the industry. To support our growth, we are intensifying recruitment efforts, actively bringing foreign professionals into Japan, including those from Turkey, India, Taiwan, and Spain. This is part of our broader global talent acquisition strategy, with a focus on international development rather than outsourcing.

- How easy or challenging is it to find individuals with the specific AI skills and expertise your company needs?

As mentioned earlier, we already had a highly-regarded CTO in the field of generative AI. Talented individuals have joined us because they were excited about the opportunity to work on generative AI together with our CTO. We also assigned dedicated HR staff to handle recruitment, and are focusing on hiring foreign talent as well.

- Have you faced any unique challenges or advantages in talent acquisition as an AI startup in Japan/UK compared to other tech sectors?

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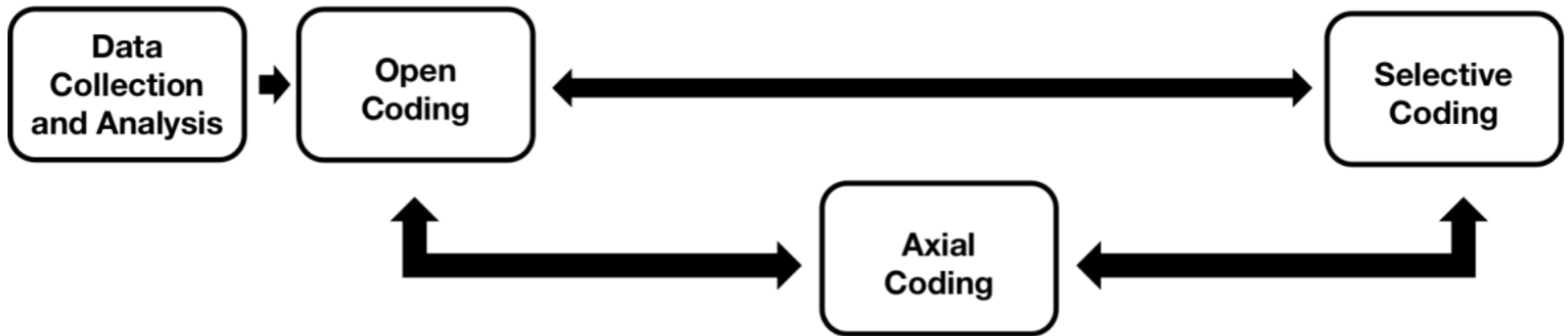
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INTERVIEW QUESTIONS

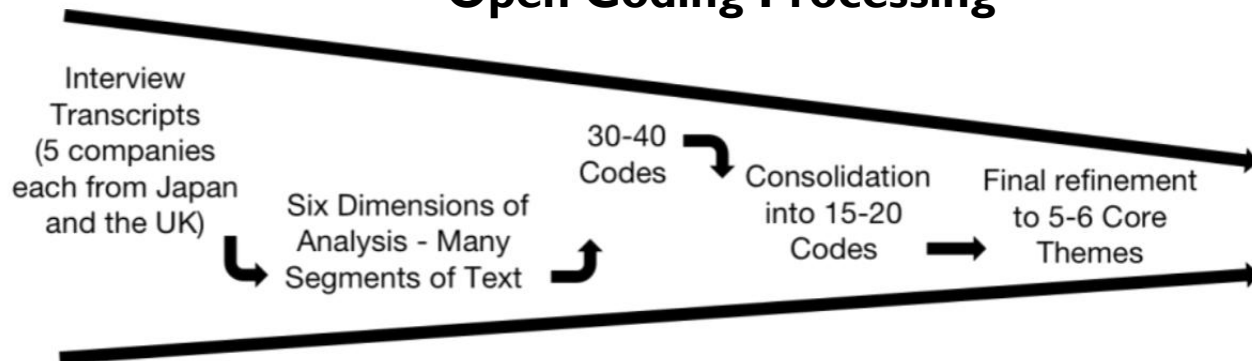
TABLE 3 *
Interview Questions

Dimension	Interview Questions
1. Access to Funding	<ul style="list-style-type: none"> - How would you compare the ease of obtaining funding from banks, venture capitalists, angel investors, or other financial institutions for your AI startup? - Were there any unique funding opportunities or challenges you faced as an AI startup in [Japan/UK]? - How does the funding landscape for AI startups in [Japan/UK] compared to what you know about other countries?
2. Entrepreneurial Spirit	<ul style="list-style-type: none"> - How would you describe the general perception of entrepreneurship in [Japan/UK], particularly in the AI sector? - How tolerant is the business environment in [Japan/UK] towards risk-taking and potential failure? - How supportive were your family, friends, and professional network when you decided to start an AI company?
3. Talent Acquisition	<ul style="list-style-type: none"> - What has been your experience in attracting and retaining talented management team members and engineers? - How easy or challenging is it to find individuals with the specific AI skills and expertise your company needs? - Have you faced any unique challenges or advantages in talent acquisition as an AI startup in [Japan/UK]?
4. Government Support	<ul style="list-style-type: none"> - What types of government support, if any, have you received for your AI startup in [Japan/UK]? - How would you evaluate the effectiveness and accessibility of government programs for supporting AI startups? - Are there any specific regulations or policies in [Japan/UK] that have significantly impacted your AI startup, either positively or negatively?
5. Infrastructure Resource	<ul style="list-style-type: none"> - How would you assess the availability and quality of necessary infrastructure resources (e.g., high-performance computing, data centers) for AI startups in [Japan/UK]? - Have you utilized any AI-specific coworking spaces, incubators, or accelerators in [Japan/UK]? If so, how impactful were they? - How has the digital infrastructure (e.g., 5G networks, cloud services) in [Japan/UK] supported or hindered your AI startup's development?
6. Collaboration with Large Companies	<ul style="list-style-type: none"> - Were large companies likely to engage in transactions (purchasing) with startups? - Were large companies likely to form alliances with startups? - Did large companies invest in startups? (How much CVC investment was there?)

CODING CONCEPT

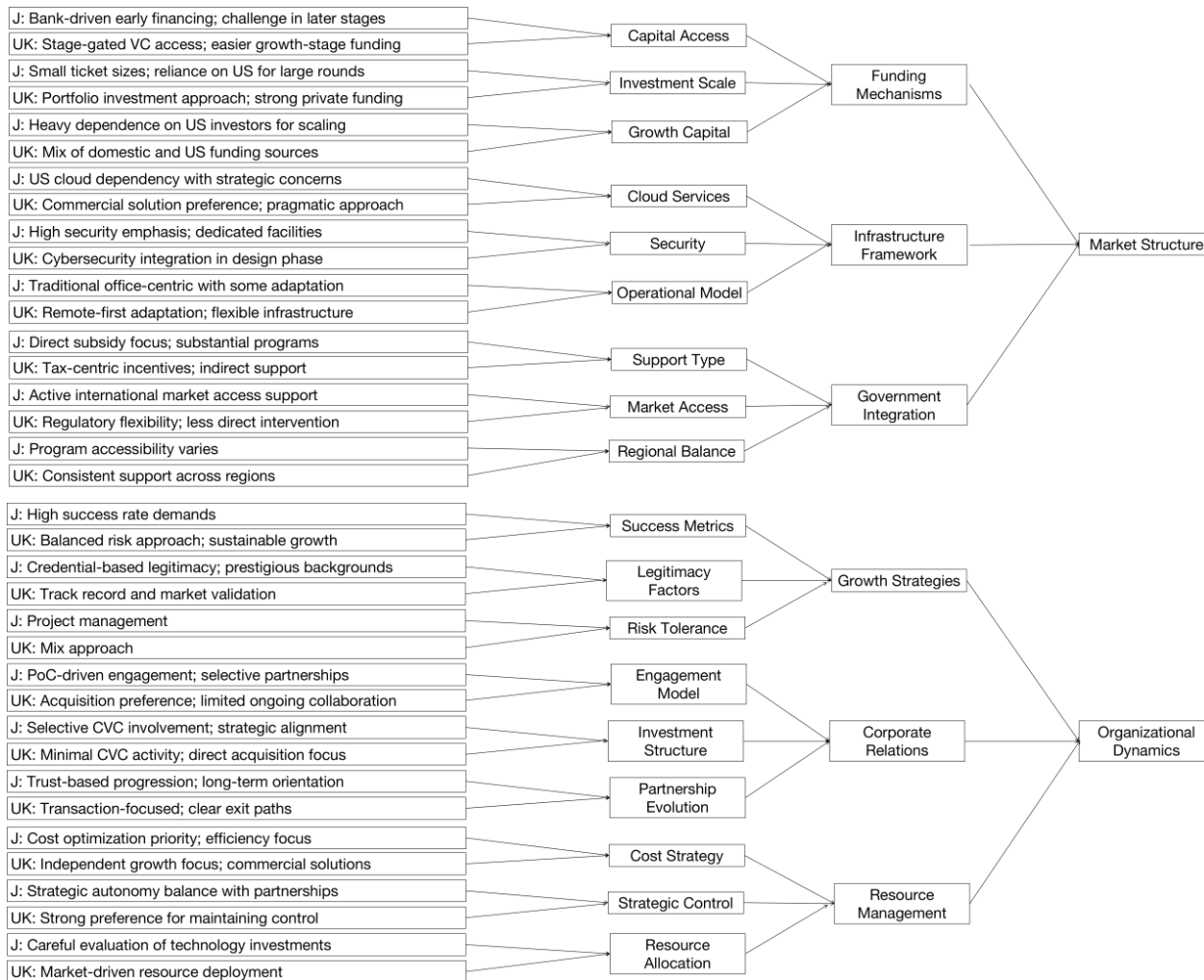


Open Coding Processing



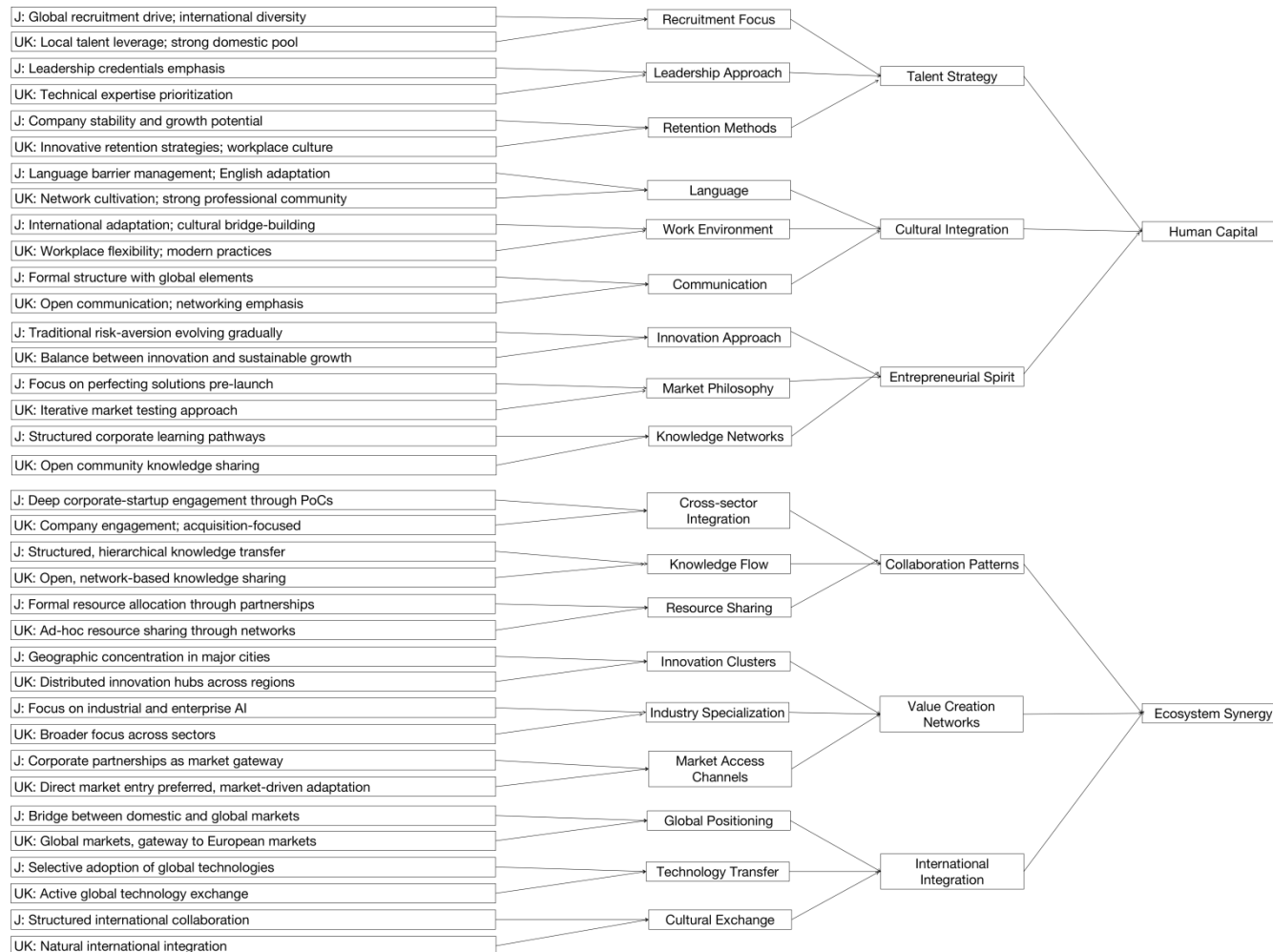
INTERVIEW DATA ANALYSIS

- JAPAN AND UK OVERVIEW



INTERVIEW DATA ANALYSIS

- JAPAN AND UK OVERVIEW CONTINUED



INTERVIEW DATA ANALYSIS

- UK DETAILS

- Funding patterns: Early-stage challenges, growth-stage opportunities
- Entrepreneurial character: Balance of innovation and sustainable growth
- Talent dynamics: Strong recruitment, retention challenges
- Government support: Tax policies, regulatory environment
- Infrastructure landscape: Commercial solutions dominance
- Corporate engagement: Limited large company interaction

INTERVIEW DATA ANALYSIS

JAPAN INTERVIEW DATA ANALYSIS AND RESULTS

I. Access to Funding

- Early-stage AI startups benefit from accessible bank loan from public-private programs.
- A well-established environment for equity financing
- VCs tend to require established services or products
- Japanese investors cannot meet the demand for large amounts, so later-stage AI startups must rely on U.S. investors.

INTERVIEW DATA ANALYSIS

JAPAN INTERVIEW DATA ANALYSIS AND RESULTS

2. Entrepreneurial Spirit

- Traditionally, Japanese society has a risk-averse and conservative social culture
- With low tolerance for failure
- However, this is gradually shifting with the younger generations, as top graduates and professionals establish more startups.

INTERVIEW DATA ANALYSIS

JAPAN INTERVIEW DATA ANALYSIS AND RESULTS

3. Talent Acquisition

- Difficulty in recruiting talent, particularly engineers
- If companies have a top talent , it tends to attract others
- Hiring foreign staff actively
- Nurturing AI engineers internally

INTERVIEW DATA ANALYSIS

JAPAN INTERVIEW DATA ANALYSIS AND RESULTS

4. Government Support

- Most successful startups grow independently without relying on government support and operate within market mechanisms
- International market access support through JETRO

INTERVIEW DATA ANALYSIS

JAPAN INTERVIEW DATA ANALYSIS AND RESULTS

5. Infrastructure Resources

- Heavy reliance on major U.S. IT companies
- The cloud services of U.S. IT companies are the global standard
- Japanese startups can't choose an alternative.
- This dependency risk is a fundamental dilemma.

INTERVIEW DATA ANALYSIS

JAPAN INTERVIEW DATA ANALYSIS AND RESULTS

6. Collaboration with Large Companies

- Japanese large companies want to make active relationships with startups.
- Transactions and corporate alliances between Japanese large companies and startups are becoming more common
- Investments from Japanese large companies namely CVC investment are also active.

FINDINGS AND DISCUSSION

Value Creation

- **Japan:** Market-driven growth; strong commercialization and practical implementation.
- **UK:** Focus on fundamental research; strong university-industry knowledge transfer.

Value Capture

- **Japan:** Strong domestic market validation, efficient with smaller funding.
- **UK:** Longer development cycles, larger funding needs, international focus from the beginning.

FINDINGS AND DISCUSSION

Value Distribution

- **Japan:** Centralized in Tokyo.; relies on human networks for talent acquisition
- **UK:** Broader geographical spread e.g. London, Cambridge; international talent, higher costs.

Governance Structures

- **Japan:** Market-driven approach, minimal government intervention, strong corporate engagement frameworks.
- **UK:** Structured government support approach, formal collaboration frameworks.

FINDINGS AND DISCUSSION

Governance Mechanisms

- **Japan:** Informal, relationship-based transactions, smooth smaller-scale funding.
- **UK:** Formal, competitive funding processes; larger in size, but also stricter in requirements.

Key Challenges & Recommendations

- **Japan:** Small investment scale, slow decision-making, weak global reach
→ *Need: larger funding pools, faster decision-making, aggressive global expansion*
- **UK:** Talent retention, weak corporate engagement
→ *Need: stronger talent strategies and fostering stronger startup-corporate collaboration*

CONCLUSION AND FUTURE WORK

Overall Contribution

- The first comprehensive comparison of Japanese and the UK AI startup ecosystems outside the US-China axis

The Strategic Takeaway

- Building competitive AI startup ecosystems isn't about copying Silicon Valley.
- Success lies in leveraging local strengths and ensuring global connectivity—in funding, talent, and knowledge.

CONCLUSION AND FUTURE WORK

Future Research Directions

- Extend ecosystem theory to reflect AI-specific characteristics
- Explore AI's interaction with national innovation systems for new theoretical insights.
- Address current study limitations:
 - Expand sample sizes (≥ 20 startups per country).
 - Incorporate quantitative data and analysis.
 - Broaden the scope to include other emerging AI startup ecosystems.



THANK YOU

Do you have any questions?

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