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News From Around the World: AI AND FRANCHISING CHINA

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#### 1. Introduction

The development of AI in China is at the center stage in the last few months. The debut of the new generation large language model Deepseek V3, which was claimed to be a low-cost model, triggered a significant price volatility of Nvidia's stock price in late January this year<sup>1</sup>. Such large language model was a direct challenge to various AI models from the United States such as OpenAI's ChatGPT in terms of costs and functionality. In response to Deepseek V3's threat, Alibaba also released its new AI model several days later<sup>2</sup>. Tencent, another IT giant of the country, launched its new reasoning model in late March<sup>3</sup>.

Perhaps we should ask the AI for the topic. Below is the extract of the answer of Deepseek to "Use of AI in franchising, what do you know?":<sup>4</sup>

- " 1. Site Selection & Market Analysis
  - AI analyzes demographics, foot traffic, and competitor locations to recommend optimal franchise locations.
  - Predictive analytics helps forecast sales potential based on historical and real-time data.
  - 2. Customer Personalization & Marketing
    - AI-powered CRM systems track customer behavior to tailor promotions (e.g., personalized discounts via mobile apps).
    - Chatbots and virtual assistants handle customer inquiries, bookings, and feedback 24/7.
  - 3. Operational Efficiency
    - AI automates inventory management, predicting demand to reduce waste (used in food franchises like McDonald's).
    - Smart scheduling tools optimize staff shifts based on sales forecasts.
  - 4. Fraud Detection & Financial Management
    - AI monitors transactions to detect fraudulent activities (e.g., unusual payment patterns).
    - Franchisors use AI-driven analytics to assess franchisee performance and financial health.
  - 5. Training & Support
    - *AI-powered virtual training assistants help franchisees and employees learn procedures faster.*
    - Natural Language Processing (NLP) enables real-time Q&A support for franchisees.
  - 6. Supply Chain Optimization
    - AI predicts supply needs, reducing delays and costs (e.g., Domino's uses AI for

<sup>&</sup>lt;sup>1</sup> It was reported that the low cost model's debut wiped almost US\$600 billion from Nvidia's market value on a single trading day as it was claimed that AI companies no longer needed high-end Nvidia chips, see <a href="https://www.ft.com/content/ee83c24c-9099-42a4-85c9-165e7af35105">https://www.ft.com/content/ee83c24c-9099-42a4-85c9-165e7af35105</a>. Deepseek's low development cost claim was subsequently challenged, see <a href="https://www.reuters.com/technology/artificial-intelligence/big-tech-faces-heat-chinas-deepseek-sows-doubts-billion-dollar-spending-2025-01-27/">https://www.reuters.com/technology/artificial-intelligence/big-tech-faces-heat-chinas-deepseek-sows-doubts-billion-dollar-spending-2025-01-27/</a>. <sup>2</sup> <a href="https://www.scmp.com/video/technology/3296789/chinas-alibaba-releases-new-ai-model-said-outperform-competitors-">https://www.scmp.com/video/technology/3296789/chinas-alibaba-releases-new-ai-model-said-outperform-competitors-</a>

<sup>&</sup>lt;sup>2</sup> <u>https://www.scmp.com/video/technology/3296789/chinas-alibaba-releases-new-ai-model-said-outperform-competitors-deepseek-and-openais-gpt-4o</u>.

<sup>&</sup>lt;sup>3</sup> <u>https://www.thestandard.com.hk/breaking-news/fc/2/230574/Tencent-launches-T1-reasoning-model-amid-growing-AI-competition-in-China</u>.

<sup>&</sup>lt;sup>4</sup> The result was generated on March 31, 2025. The author generated another similar answer from Grok 3 on the same subject matter. The results are similar.

*ingredient logistics).* 

- 7. Competitive Intelligence
  - AI scrapes competitor data (pricing, promotions) to help franchises adjust strategies dynamically.

Examples of AI in Franchising:

- McDonald's uses AI for dynamic drive-thru menus and kitchen automation.
- 7-Eleven employs AI for demand forecasting and personalized marketing.
- Domino's leverages AI for delivery route optimization and voice ordering.

Future Trends:

- AI-driven franchise matching (connecting investors with ideal franchise opportunities).
- Fully autonomous franchise outlets (e.g., AI-run fast-food kiosks)."

Then, the author further asked "If any of them are happening in China now?"<sup>5</sup>:

- " 1. Smart Site Selection & Market Expansion
  - *KFC China (Yum China) uses AI-powered analytics (e.g., geospatial data, foot traffic patterns) to choose optimal locations for new stores.*
  - Luckin Coffee employs big data and AI to analyze consumer behavior before opening new outlets.
  - 2. AI-Driven Customer Engagement
    - Alibaba's Hema Fresh (  $\Box \Box \Box \Box$ ) uses AI-powered facial recognition payments and personalized recommendations via its app.
    - *Meituan* ( $\square \square$ ) and *Ele.me* ( $\square \square \square$ ) *deploy AI chatbots for customer service and dynamic pricing for franchise partners.*
  - 3. Autonomous & Smart Stores
    - JD.com's unmanned convenience stores use  $AI + IoT^6$  for cashier-less checkout (computer vision, RFID).
    - Bingobox (  $\square \square \square \square$  ) operates AI-powered unmanned franchise convenience stores across China.
  - 4. AI in Operations & Supply Chain
    - *HeyTea* (□ □) uses *AI* for demand forecasting to optimize ingredient supply and reduce waste.
    - Yum China (KFC, Pizza Hut) applies AI in inventory management to automate stock replenishment.
  - 5. AI-Powered Franchisee Support & Training
    - Chinese franchise brands (e.g., Mixue Ice Cream & Tea  $\Box \Box \Box \Box$ ) use AI-driven training platforms to onboard franchisees faster.
    - Tencent's AI solutions help franchise businesses automate HR and staff scheduling.
  - 6. AI for Fraud & Quality Control

<sup>&</sup>lt;sup>5</sup> The result was generated on March 31, 2025. The author note that these statements are not 100% accurate while a small part of the statements cannot be verified by third party sources. However, they are fine for the purpose of understanding the general situation, while the intention here is to demonstrate what the AI can achieve at this point of time.

<sup>&</sup>lt;sup>6</sup> Internet of Things.

- Starbucks China uses AI-powered surveillance to monitor hygiene and service quality in franchise stores.
- AI-based financial tools (e.g., Ant Group's systems) help detect fraudulent transactions in franchise networks.
- 7. AI in Food Franchising (Robotics & Automation)
  - Robotic restaurants (e.g., Haidilao's smart hot pot locations) use AI-driven robots for food delivery and kitchen automation.
  - AI-powered vending machines (e.g., Coffee Box  $\Box \Box \Box \Box \Box$ ) allow franchise-like expansion with minimal human intervention.

Future Trends in China's AI-Powered Franchising

- More unmanned franchise models (AI + IoT-driven stores)<sup>7</sup>.
- Hyper-personalization (AI analyzing WeChat/Alipay spending habits for targeted promotions).
- AI-as-a-Service for franchisors (Baidu, Alibaba, Tencent offering AI tools for franchise brands).

*China's advanced digital ecosystem (mobile payments, AI, big data) makes it a leader in AIdriven franchising..."* 

#### 2. 2023 Interim Measures

Most of the AI related regulations were issued in the last few years and there are various governmental agencies involved in the process. The more general one is *Interim Measures for the Administration of Generative Artificial Intelligence Services* which was implemented in 2023 ("2023Interim Measures"). This 2023 Interim Measures is a generic set of rules which is applicable to the use of AI in different sections. For the sake of clarity, this Interim Measures itself is a set of interim implementation rules which is secondary to other legislations such as *Cybersecurity Law*, *Personal Information Protection Law* and so on.

The definition of generative artificial intelligence is model and technology that can generate texts, pictures, sounds, video footage<sup>8</sup>.

From the administrative perspective, Article 3 of the 2023 Interim Measures provides that there should be a management and supervision system run by the administrative authority, and generative AIs should be categorized into different classes. The 2023 Interim Measures does not provide further details as to the system. Up to time when this article is prepared, such management and supervision system has not been announced.

The rest of the 2023 Interim Measures are relatively generic provisions such as standard national security consideration<sup>9</sup>, prohibition of discrimination<sup>10</sup>, prohibition of monopolistic behaviour and unfair competition behaviour<sup>11</sup>, observance of others' rights such as intellectual property rights and personal data rights<sup>12</sup>. The operator is also responsible for the legal liabilities of contents so generated<sup>13</sup>. There

<sup>&</sup>lt;sup>7</sup> The author disagrees. Unmanned stores are not expanding in recent years, as the initial investment of these unmanned stores is much higher than manned stores.

<sup>&</sup>lt;sup>8</sup> Article 22(1) of 2023 Interim Measures. The author notes that the definition of deep synthesis in the Administrative Rules on Internet Information Services Deep Synthesis literally is not very different from the definition of generative AI except for deep synthesis, deep learning is involved.

<sup>&</sup>lt;sup>9</sup> Article 4(1) of 2023 Interim Measures.

<sup>&</sup>lt;sup>10</sup> Article 4(2) of 2023 Interim Measures.

<sup>&</sup>lt;sup>11</sup> Article 4(3) of 2023 Interim Measures.

<sup>&</sup>lt;sup>12</sup> Article 4(4) of 2023 Interim Measures.

<sup>&</sup>lt;sup>13</sup> Article 9 of 2023 Interim Measures.

are also certain technical rules such as data labeling rules should be transparent and concrete<sup>14</sup>, implementation of effective measures to control addictive behaviour of young users<sup>15</sup>, preservation of records<sup>16</sup>, and the authority can demand the operators to provide information on the training data such as sources, scale, data labeling rules and applied algorithms<sup>17</sup>.

### 3. 2022 Algorithm Regulations

There was another piece of regulations implemented in 2022 covering algorithms: *Administrative Regulations on Internet Algorithm Recommendation Services* ("2022 Algorithm *Regulations*"). Likewise, it is a set of administrative rules which is based on various national legislations. This 2022 Algorithm Regulations provides more guidance from the operational perspective.

The definition of algorithm recommendation services includes generative and synthetic algorithms, personalized contents pushing algorithms, sorting and refined selection algorithms, retrieval and filtering algorithms, scheduling and decision-making algorithms<sup>18</sup>. Several authorities<sup>19</sup> shall jointly regulate different categories of algorithms with reference to the public opinion and social mobilization capabilities, contents, size of users, importance of the data to be processed, the degree of intervention to users' behaviour of each category<sup>20</sup>. As the first step of regulating these algorithms, an online recordal platform for algorithms with public opinion and social mobilization capabilities<sup>21</sup> was set up and is now managed jointly by these authorities.

To start with some general provisions:

- 3.1 prohibition of settings which leads to addictive and over-consumption behaviour<sup>22</sup>;
- 3.2 illegal and unethical contents should not be labelled for pushing information to users<sup>23</sup>;
- 3.3 prohibition of use of algorithms to block information, over-recommend certain contents, manipulate ranking or sequence of search results<sup>24</sup>;
- 3.4 prohibition of use of algorithms to unreasonably restrict, hinder, or affect the flow of information for monopolistic and unfair competition behaviour<sup>25</sup>;
- 3.5 there should be special module for users below age of majority with enhanced protective measures<sup>26</sup>;
- 3.6 there should be special module for elderly users with elderly friendly adaptations and enhanced protective measures<sup>27</sup>;
- 3.7 in the event the algorithm is targeting service providers or workers (i.e. takeaway delivery applications), statutory benefits should be provided and the labour

<sup>&</sup>lt;sup>14</sup> Article 8 of 2023 Interim Measures.

<sup>&</sup>lt;sup>15</sup> Article 10 of 2023 Interim Measures.

<sup>&</sup>lt;sup>16</sup> Article 14 of *2023 Interim Measures* (if certain violations have been identified), and Article 19 of *2023 Interim Measures*. This requirement is also seen in Article 4.3e of *Internet Safety Standards Practical Guide* (TC260-PG-20211A v1.0-202101) issued by the National Information Security Standardization Technical Committee in 2021.

<sup>&</sup>lt;sup>17</sup> Article 19 of 2023 Interim Measures.

<sup>&</sup>lt;sup>18</sup> Article 2 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>19</sup> There are several agencies here, including the Cyberspace Administration, Office of Central Cyberspace Affairs Commission, while the Ministry of Public Security and the State Administration for Market Regulation are also relevant authorities.

<sup>&</sup>lt;sup>20</sup> Article 23 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>21</sup> <u>https://beian.cac.gov.cn/#/index</u>.

<sup>&</sup>lt;sup>22</sup> Article 8 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>23</sup> Article 10 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>24</sup> Article 14 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>25</sup> Article 15 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>26</sup> Article 18 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>27</sup> Article 19 of 2022 Algorithm Regulations.

related laws should be observed, while the order allocation, remuneration and payment arrangements should be properly designed<sup>28</sup>; and

3.8 prohibition of price differentiation and different treatments determined through the use of users' data such as preferences, transactional habits, causing disadvantages to users<sup>29</sup>.

The more technical provisions are:

- 3.9 establishing a special database for unlawful and unethical information with clear criteria, regulations and procedures<sup>30</sup>;
- 3.10 unlawful information should be stopped immediately, while unethical information should be managed according to the relevant rules and regulations<sup>31</sup>;
- 3.11 there should be a mechanism allowing human intervention and users are allowed to make choices<sup>32</sup>;
- 3.12 encouraging operators to conduct content de-weighting and deduplication <sup>33</sup> and scattering intervention such as the use of techniques such as shuffling<sup>34</sup> through comprehensive implementation, and optimize the transparency of rules on search, sorting, selecting, pushing, and display of contents to avoid adverse impacts to users and minimize disputes<sup>35</sup>; and
- 3.13 operators should allow users to choose algorithms that can be used without processing personal characteristics, and users may disable the algorithm<sup>36</sup>.

#### 4. 2024 Security Governance Framework

At this juncture, one may note that even 2022 Algorithm Regulations is providing more substance than 2023 Interim Measures, these rules are still relatively general. This reflects the fact that the governments around the world are trying to regulate the area without over-regulating it, while it may be too early to introduce detailed rules because the technology itself is not at the maturity stage. Indeed, we also need to bear in mind AI is a highly technical aspect.

In 2024, the National Technical Committee 260 on Cybersecurity of Standardization Administration of China issued the AI Security Governance Framework ("2024 Security Governance Framework")<sup>37</sup>. This document is a policy document containing guidelines to various governmental agencies and industrial organizations, and therefore the contents therein are policy statements rather than mandatory rules. However, when we discuss Chinese AI laws and regulations, 2024 Security

<sup>&</sup>lt;sup>28</sup> Article 20 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>29</sup> Article 21 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>30</sup> Article 9 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>31</sup> Article 9 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>32</sup> Article 11 of 2022 Algorithm Regulations.

<sup>&</sup>lt;sup>33</sup> For those who are interested in this technical term, please see <u>https://medium.com/@sundeepkumars/ensuring-unique-</u>recommendations-the-challenge-of-deduplication-in-recommender-systems-4b2f558e9f57.

<sup>&</sup>lt;sup>34</sup> The author is unable to find a good English source for this concept as the English sources on this subject are more on the technical side, and a page on the Zhihu.com (a Chinese website similar to Wikipedia) <u>https://zhuanlan.zhihu.com/p/191017039</u> and an article on github.com on weighted shuffle <u>https://zqchen90.github.io/2016/07/28/weigthed-shuffle/</u> may help to explain the technique (readers may use the translation function to understand the contents therein). Another article on xebia.com offers a good insight to this concept <u>https://xebia.com/blog/elitist-shuffle-for-recommendation-systems/</u> although it only covers one or two kinds of shuffling.

<sup>&</sup>lt;sup>35</sup> Article 12 of 2022 Algorithm Regulations. Please note the word "encouraging" was used and therefore somehow this is not a mandatory provision.

<sup>&</sup>lt;sup>36</sup> Article 12 of 2022 Algorithm Regulations. This echoes the spirit of Article 16 of New Generation AI Ethics Guidelines implemented in 2021, which will not be discussed here as 2023 Interim Measures and 2022 Algorithm Regulations provides a better view on the direction of the regulators.

<sup>&</sup>lt;sup>37</sup> The current version is marked "V1.0", and the link for downloading the English version is <u>https://www.cac.gov.cn/2024-09/09/c 1727567886199789.htm</u> (the bottom of the page).

Governance Framework provides insight to the direction being taken by the government.

There is a very informative table in the 2024 Security Governance Framework setting out the major risks identified by the authorities, the suggested technical countermeasures, and governance measures<sup>38</sup>. It is anticipated that further regulatory measures will take these considerations into account.

Safety risks			Technical countermeasures	Comprehensive governance measures
Inherent safety risks	Risks from models and algorithms	Risks of explainability Risks of bias and discrimination Risks of robustness Risks of stealing and tampering Risks of adversarial attack	enhance explainability, predictability implement security specifications, target to eliminate security issues, discriminatory tendency; and enhance robustness	<ul> <li>Advance research on AI explainability</li> <li>Create a responsible AI R&amp;D and application system</li> </ul>
		Risks of illegal collection	those mentioned in the last two boxes above observe personal data	
	Risks from data	and use of data Risks of improper content and poisoning in training data	laws         observe intellectual         property laws; enhanced         protection of sensitive         personal data <sup>39</sup> ; use         good and legal data for         training; observe rules         on export of personal         data	• Improve AI data security and personal information protection regulations
		Risks of unregulated training data annotation Risks of data leakage	use good and legal data for training enhanced protection of sensitive personal data	
	Risks from AI system	Risks of exploitation through defects and backdoors	improve level of transparency of the AI product; enhance risk identification and security measures	<ul> <li>Strengthen AI supply chain security</li> <li>Share information, and emergency response of AI safety risks and threats</li> </ul>
		Risks of computing infrastructure security Risks of supply chain security	proper maintenance and management to avoid interruption of services supply chain security	
Safety risks in AI applications	Cyberspace risks	Risks of information and content safety Risks of confusing facts, misleading users and bypassing authentication Risks of abuse for cyberattacks	security protection system in place to avoid unreliable results being generated	• Implement a tiered and category- based management system for AI application

<sup>&</sup>lt;sup>38</sup> Page 27 of *2024 Security Governance Framework*, certain modifications (such as rearranging the sequence, adding high-level summaries of the relevant technical counter measures, and remove some contents irrelevant to our discussion) have been done for making the table easier to follow.

<sup>39 &</sup>quot;Sensitive personal information" means personal information that, if leaked or used illegally, may easily lead to the infringement of the dignity of natural persons, or may seriously endanger their personal and property safety, including information relating to biometrics, religious beliefs, specific identities, healthcare, financial accounts, an individual's whereabouts etc., as well as personal information of minors under the age of 14, see Article 28 of *Personal Information Protection Law*.

Real-world risks	Risks of information leakage due to improper usageRisks of security flaw transmission caused by 	establish data safeguard and observe personal data law, protect important data those mentioned in the last two boxes above capability to trace the use of end users capability to trace the use of end users; establish service limitations to prevent abuse	<ul> <li>Establish a traceable management system for AI services</li> <li>Increase efforts to train talent in AI safety and security</li> <li>Establish and improve mechanisms for AI safety and security education, industry self-regulation, and social supervision</li> <li>Promote international exchange and cooperation on AI safety governance</li> </ul>
Cognitive risks	Risks of amplifying the effects of "information cocoons" Risks of usage in launching cognitive warfare	prevent abuse of collecting, connecting, gathering, analyzing and digging into users' inquiries to profile their identity, preference and personal mindset those mentioned in the box above; identify unexpected, untruthful and inaccurate outputs via technological means; improve AI generated content testing technologies	
Ethical risks	Risks of exacerbating social discrimination and prejudice, and widening the intelligence divideRisks of AI becoming uncontrollable in the futureRisks of challenging traditional social order	training data should be filtered and output should be verified AI used in key sectors should be equipped with high-efficient emergency management control measures those mentioned in the last two boxes above	

## 5. Concluding remarks

There are also other administrative regulations not covered here, such as the *Measures for the Labelling of Artificial Intelligence-Generated and Synthetic Content*, which was just issued in March 2025. It requires all AI generated and synthetic contents (e.g. promotional videos created by synthetic technology) should be labelled for identification purpose. Since the technology and regulatory regime is still evolving, close attention should be paid.