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Reforming China's Pre-Cooked Meal Kit Industry: Strategic Lessons from Global Leaders

Xinyan Zhang

Faculty of Computing & Data Sciences, Boston University, Boston, USA
anitaxy@bu.edu

Abstract: China's pre-cooked meal kit industry is developing rapidly and has received increasing attention from the public. This study examines the industry from four key dimensions: policy support, technological background, supply chain structure, and consumer profiles. It then analyzes internationally leading meal kit enterprises, such as HelloFresh and Blue Apron, focusing on their strength in personalization, operational efficiency, ingredient transparency, and consumer engagement. Drawing on these insights, the study proposes five recommendations to support the sustainable development of China's pre-cooked meal sector: (1) introduce dedicated regulations tailored to the characteristics of meal kits; (2) optimize supply chains through direct sourcing and digitalization; (3) enhance food safety via traceability systems and standardized nutrition labeling; (4) build consumer trust through transparent communication and participatory cooking experiences; and (5) expand personalized product offerings and accessibility in lower-tier markets.

Keywords: Pre-cooked Meal Kits, Food Safety, Food Supply Chain, Consumer trust, personalization

1. Introduction

1.1. Background

Pre-packaged meals, also known as pre-cooked meal kits or prepared foods, are made from one or more edible agricultural products and their by-products as raw materials, with or without seasoning or other additives, and without the addition of preservatives, through industrial pre-processing (such as stirring, pickling, shaping, frying, grilling, steaming, etc.), with or without seasoning packages, in accordance with the storage, transportation, and sales conditions indicated on the product label. These meals can only be consumed after heating or cooking [1]. This paper places particular emphasis on pre-cooked meal kits within the broader category of pre-packaged meals and offers targeted recommendations for the development of China's meal kit industry, as they present greater potential for promoting healthier and more transparent dietary solutions.

In recent years, China's pre-cooked meal kits have rapidly risen and become a new choice for families and the catering industry. After purchasing meal kits at home, they can be directly heated and consumed, greatly reducing cooking time and providing convenience for busy people. The catering industry also improves efficiency through pre-cooked meal kits. This development has been driven by economic, technological, and social factors. In terms of economy, the disposable income of residents continues to rise, from 30733 yuan per capita in 2019 to 41314 yuan per capita in 2024

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[2,3]. The per capita disposable income of residents in China has increased by about 34.45%, and the compound annual growth rate is about 6.02%, providing a good consumption foundation for the pre-cooked meal kit market [2,3].

On the social level, the accelerating pace of life and the increasing work demands and stress have made it difficult for people to find time to cook. The growing number of dual-income households and individuals living alone has further contributed to the prevalence of this situation. In terms of technology, the continuous advancement of cold chain logistics, intelligent packaging, and digital platforms has jointly promoted the development of the pre-cooked meal kits industry. The COVID-19 pandemic particularly boosted demand as dining-out restrictions increased home cooking needs. Pre-cooked meal kits met consumer demands for convenience and time-saving solutions, while their extended shelf life aligned with stockpiling behaviors.

These shifting conditions laid the groundwork for the growth of meal kits, which balance convenience with fresh meal preparation. Together, these factors propelled remarkable industry expansion. In 2022, the size of China's pre-cooked food market reached 419.6 billion yuan, and it is expected to reach 1072 billion yuan by 2026 [4].

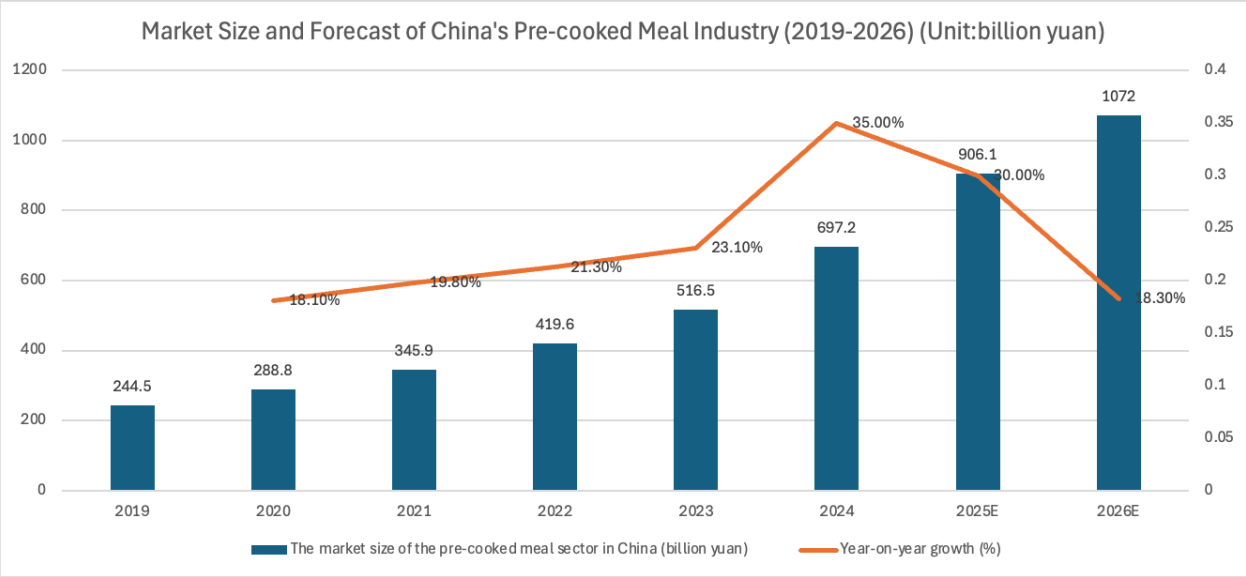

Figure 1: Market size and forecast of China's pre-cooked meal industry from 2019 to 2026 (photo credit: original). Data source [4]

1.2. Why pre-cooked meal kits matter

While China's pre-cooked meal kit market has brought significant convenience to consumers, it also faces challenges in nutrition, affordability, and environmental sustainability. The significance of this study lies in the urgent demand for convenient, nutritious, and economical catering solutions among over 1.4 billion low - and middle-income individuals as the pace of life accelerates. However, the current pre-cooked meal kit market faces problems such as nutritional imbalance, high prices, and excessive packaging, which urgently require systematic optimization solutions. By optimizing the supply chain, reducing costs, and enhancing food safety standards, we aim to guide the industry toward a healthier and more environmentally sustainable future.

1.3. Research objectives and scope

This study aims to systematically analyze the development status of China's pre-cooked meal kit industry through four key dimensions: policy support, technological background, industrial chain

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dynamics, and consumer profiles. It also examines the operational models and market strategies of globally leading pre-cooked meal enterprises to identify the key factors behind their success. In particular, HelloFresh and Blue Apron are chosen for their personalization, operational efficiency, ingredient transparency, nutritional qualities, and consumer trust. The ultimate objective is to pinpoint core bottlenecks in China's pre-cooked meal sector and propose actionable strategic recommendations to guide the industry's transformation toward healthier, more affordable, and environmentally sustainable solutions. These recommendations aim to lead the industry's transformation toward greater health, affordability, and environmental sustainability, enabling more than 1.4 billion middle-to-low-income consumers across the country to access safer, more nutritious, and affordable pre-cooked meals.

2. China's pre-cooked meal kit market: a structural overview

2.1. Policy landscape and government support

In recent years, the Chinese government has placed great importance on the development of the pre-cooked meal kit industry. To promote this development, a series of supportive policies have been introduced at both the national and local levels.

At the national level, policies primarily focus on food safety regulation, cold chain logistics construction, and industry standard setting. For example, *the Measures for the Administration of Food Production Licenses* issued in January 2020 stipulate that food production activities in China and within the country must obtain a food production license in accordance with the law. The principle of "one enterprise, one certificate" shall be implemented for food production permits, and the local food and drug supervision and administration departments at or above the county level shall be responsible for managing food production permits within their respective administrative regions [5]. In March 2020, *The Notice on Carrying out the Construction of the First Batch of National Backbone Cold Chain Logistics Bases* stated that the core goal at the national level is to integrate existing cold chain logistics resources, rely on existing infrastructure, and build a number of national backbone cold chain logistics bases in key agricultural product production areas and distribution centers, gradually forming a nationwide cold chain logistics network system [4].

Local governments have actively responded to the central government's call by using pre-made vegetables as a foothold to promote rural revitalization. Since 2022, various regions have introduced different new policies based on local conditions and unique advantages to promote the healthy development of the pre-cooked meal kit industry, offering support in areas such as R&D, talent development, financing, and marketing [4]. In 2023, the *Several Measures to Support the High Quality Development of the Prepared Dish Industry* were launched, with 10 measures introduced to support the high-quality development of the prefabricated vegetable industry, promote the further transformation and upgrading of Sichuan cuisine towards scale, standardization, and industrialization, and promote rural revitalization [6]. *The Action Plan for Accelerating the Development of Pre-cooked meal Industry in Henan Province (2022-2025)* released in October 2022 includes establishing a standard system for the prefabricated vegetable industry, strengthening research and development design, enhancing the digitalization level of the industry, and strengthening the quality and safety supervision of prefabricated vegetable products [7].

However, although there have been many policies and goals from the central to local levels, there are still some problems and challenges, such as insufficient policy implementation and supervision, lack of special standards for the entire process of pre-cooked food, which may lead to regulatory loopholes and affect the effectiveness of policy implementation. In addition, industry standards are still underdeveloped, food safety supervision remains inadequate, engagement with consumers is lack, and environmental protection in the industry has not yet received sufficient attention.

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2.2. Technological infrastructure and cold chain logistics

With the rise of e-commerce, China's logistics industry has experienced rapid development, with some logistics companies entering the fresh food logistics field, promoting the development of China's cold chain transportation industry. Under the advanced logistics and distribution system, the distribution range of pre-cooked dishes has been expanded, the efficiency of product distribution has been improved, and food safety has been better ensured, all of which have contributed positively to the industry's development [4]. As an important infrastructure for cold chain logistics, the country will further increase the construction of cold storage facilities for product origin in 2024. In the first half of the year, investment in cold storage projects reached 20.718 billion yuan, up 11.39% from the previous year. The total cold chain logistics in China is 3.22 trillion yuan, marking a 3.9% year-on-year increase [8]. From 2016 to 2021, the number of refrigerated trucks in China steadily increased, with less than 120000 refrigerated trucks in 2016 and 380000 refrigerated trucks in 2022 [4].

2.3. Industry supply chain and key stakeholders

Chinese prepackaged dishes can be divided into three parts: upstream, midstream, and downstream. Upstream, raw material supply is the primary focus, including agricultural products, initial processing, and packaging enterprises. The midstream focuses on processing pre-cooked meal kits, with participation from professional pre-cooked food enterprises, traditional frozen food enterprises, and retail and catering enterprises, mainly responsible for the processing of clean and semi-finished dishes. The downstream is responsible for sales, covering channels such as distributors, e-commerce platforms, catering stores, supermarkets, etc. According to the target audience, it can be divided into B-end (enterprise customers) and C-end (ordinary consumers). Premade dishes were initially served by catering enterprises, and in recent years have gradually entered household dining tables, leading to a rapid increase in demand in the C-end market. The current industry is mainly composed of five types of entities: raw material suppliers, pre-packaged food producers, frozen food enterprises, chain catering and retail enterprises, covering the upstream and downstream of the industrial chain [4].

2.4. Consumer segments and demographic insights

According to statistics, the consumers who purchase the most pre-cooked meal kits are located in first and second-tier cities, with 23.4% of consumers distributed in first-tier cities and 23.9% distributed in second-tier cities [4]. Married individuals and middle-aged and young consumers are the main groups, with 79.1% of consumers being married, of which 69.3% are married and have children[4]. The majority of consumers are middle-aged and young, with consumers aged 22-24 accounting for 87.4% and consumers aged 31-40 accounting for 49.4% [4]. Possible reasons for this include the fast pace of urban life, high living costs, high demand for convenience, and more complete cold chain logistics, e-commerce platforms, and retail infrastructure in the first and second-tier cities, which make pre-made meals more accessible, diverse, and selectable. Middle-aged and young people, in particular, tend to value efficiency more and are highly receptive to new trends in food.

3. Global benchmarks: lessons from HelloFresh and Blue Apron

To better understand the reasons for the global success of some meal kit companies, this section analyzes two leading companies in the industry: HelloFresh, known for its personalized, sustainable, and tech-enabled meal kit delivery, and Blue Apron, recognized for its emphasis on home-cooking engagement and high-quality ingredient sourcing.

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3.1. HelloFresh: personalization, technology, and supply chain integration

Hello Fresh is a globally leading pre-cooked meal kits delivery service company headquartered in Germany, with operations in multiple countries, including the United States, the United Kingdom, and Australia. This company has many successful practices in ready-to-eat meals that offer valuable insights for Chinese enterprises. One of HelloFresh's key innovations is its multi-layered personalized recommendation system. Each week, customers can log in to the platform or mobile app to view an updated selection of about 100+ dishes. The system generates intelligent menu recommendations and dynamic adjustments based on users' dietary preferences, such as high-protein and low-carbohydrate water; food preferences or taboos, such as vegetarianism and seafood allergies; and their past ordering behavior. Users can also manually modify and freely add or change dishes. The dishes are designed by HelloFresh's professional nutritionists and chef team, with careful consideration of nutritional balance, diverse flavors, and seasonality. Unlike passive selection in a limited menu, Hello Fresh offers a wide range of menu options, personalized customization mechanisms, and a way to integrate dishes with culture, allowing users to actively participate in building their weekly menus [9]. This approach not only caters to individual taste preferences but also provides a healthier and more balanced dietary solution in terms of nutritional structure.

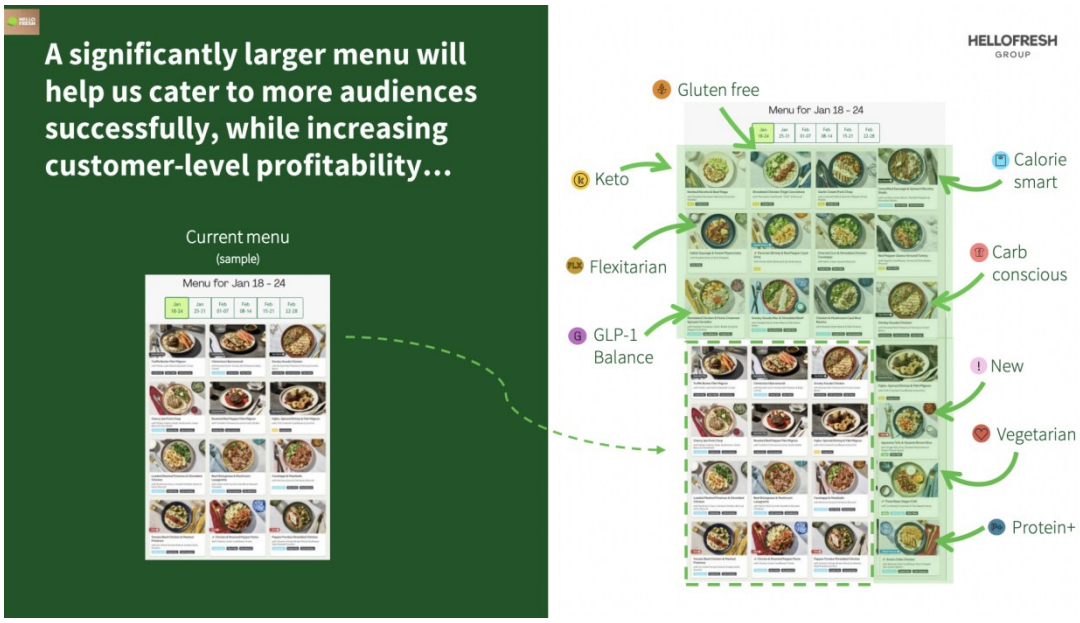

Figure 2: Personalized and expansive menus [9]

Moreover, HelloFresh has its own distribution center and collaborates directly with suppliers and farms, reducing the traditional intermediaries in the fresh food supply chain and significantly improving the freshness of ingredients. All required ingredients are pre-portioned, with each meal packaged in a bag and delivered to customers' homes, typically on a weekly basis [9]. This standardized portioning and delivery system not only minimizes food waste but also ensures the freshness and hygiene of the ingredients.

3.2. Blue Apron: cooking experience, ingredient transparency, and brand trust

In addition to HelloFresh, Blue Apron is another globally recognized leader in the home meal kit industry. Blue Apron offers valuable insights by focusing on hands-on engagement, ingredient transparency, and building consumer confidence in cooking. Its business model centers on recipe-guided cooking experiences and high-quality ingredient sourcing, making it especially appealing to

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households and first-time home cooks. Each meal kit includes detailed, illustrated step-by-step instructions that guide users through the cooking process, helping them master basic cooking skills and prepare nutritionally balanced meals while increasing their sense of engagement and accomplishment. This emphasis on transparency and the home cooking experience enables Blue Apron to create emotional connections with its customers, making its products not only convenient but also meaningful and capable of building cooking skills[10].

3.3. Comparative insights: what China can learn

By comparing international leading prepackaged meal companies such as HelloFresh and Blue Apron with the current situation in the Chinese market, it becomes clear that these international brands have generally established a comprehensive food information disclosure system in terms of product quality standards. These systems include detailed nutrition labels, complete ingredient traceability, and prominent allergen alerts, effectively enhancing consumer trust. In contrast, China has yet to implement specific labeling regulations for prepackaged dishes, resulting in insufficient transparency of product information and an underdeveloped standardization framework. This disparity directly affects consumer perception. Chinese consumers are generally cautious about pre-cooked meal kits, primarily due to concerns about ingredient freshness, over-processing, and nutritional balance. As a result, pre-cooked meal kits are often perceived as "industrialized foods."

In contrast, most HelloFresh users view MealKit as a "healthy eating solution" and are willing to pay a premium for high-quality services. While HelloFresh emphasizes healthy lifestyles, personalized services, and family participation through technology-driven experiences, Blue Apron fosters consumer trust by focusing on recipe education, home-cooking engagement, and transparent sourcing practices. Both companies invest heavily in recipe content, user education, and nutrition communication, forming a positive cycle between brand storytelling and consumer confidence. These marketing narratives starkly contrast to domestic strategies, which often rely on livestream promotions and price-based appeals rather than long-term brand values.

4. Conclusion and strategic recommendations for advancing China’s meal kit sector

In response to the key structural challenges facing China’s prepackaged meal industry, and building on the policy, market, and consumer insights outlined in this paper, this paper proposes the following five recommendations to support the sustainable growth of China’s meal kit sector.

First, regulatory improvements are critical. The Chinese government should consider formulating specific regulations for meal kits that address issues like ingredient sourcing, food safety, and labeling. This would help build consumer confidence and ensure consistent quality across the market.

Second, optimizing the supply chain is an important step. To optimize the supply chain, the industry should establish direct procurement partnerships with farmers to eliminate intermediaries and enhance source control. Implementing digital systems across the entire workflow will significantly improve operational efficiency while expanding cold chain logistics networks, especially in lower-tier markets, ensuring broader coverage. This integrated approach can maintain the freshness of ingredients while achieving cost containment throughout the distribution process.

Third, to strengthen food safety standards, the industry should establish a comprehensive traceability system requiring full disclosure of product origins, processing methods, and inspection records to ensure transparency. Work with nutrition agencies to develop scientific standards, mandatory nutrient labeling, and consumption guidelines. At the same time, promoting third-party safety certifications and fostering partnerships between industry, academia, and research will help develop unified industry benchmarks. These measures collectively build consumer confidence in both product safety and dietary health.

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Fourth, companies should prioritize consumer engagement. Meal kit companies in China should prioritize building trust with consumers by providing transparent communication about ingredient sourcing, quality assurance, and safety standards. Leveraging social media and influencer marketing can help enhance brand loyalty and reach a broader audience. Providing recipe-guided cooking experiences and fostering emotional connection through family cooking participation can further enhance user involvement and improve long-term satisfaction.

Fifth, market expansion plays a vital role in driving sustainable long-term growth. Personalized meal kits, especially those that cater to specific dietary needs or preferences, have growth potential. Companies should also explore opportunities to expand into lower-tier cities, where demand for convenient meal solutions is likely to increase as urbanization continues, which not only creates new business opportunities but also makes food more affordable and accessible for locals.

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