



Research on the Construction Strategy of Xiaomi Corporation's Ecological Chain

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Abstract. The With the upgrading of consumer demand and the increasing competition among enterprises, many companies have started to build ecological chains. Xiaomi's ecological chain construction strategy provides a new paradigm for business model innovation theory. This article provides an in-depth analysis of Xiaomi's ecological chain construction strategy and its effectiveness. Firstly, it examines the driving forces behind the formation of Xiaomi's ecological chain and outlines the company's "investment + incubation" model. Then, the study evaluates the strategy's effectiveness from the perspectives of ecological collaboration, supply chain integration, and user stickiness. Through detailed case analysis, the article reveals how Xiaomi's ecological chain fosters synergy among partner enterprises, enhances the interoperability and collaboration across smart devices within its Internet of Things (IoT) platform, and significantly increases user retention. The research results indicate that this model enhances the collaborative development of Xiaomi's IoT platform, improves the efficiency of the ecological chain, and strengthens user stickiness. In the context of globalization, Xiaomi's ecological chain construction provides valuable references for other enterprises.

Keywords: Ecological chain, Internet of Things, Supply Chain, Synergy.

1 Introduction

With the continuous development of technology and the economy, a single enterprise is no longer able to cope with the increasingly complex consumer demands. Simultaneously, the advent of the big data era has made consumers increasingly expect to meet their diversified needs through one-stop and seamless services. This demand has prompted enterprises to transform into comprehensive solutions across fields and multiple products, thereby promoting the expansion and development of the ecological chain.

Ecological chains typically include core enterprises, partners, suppliers, customers, and other stakeholders, namely upstream, midstream, and downstream. Ecological chain constituents work together to create value and achieve sustainable development through shared resources, mutual cooperation, and win-win outcomes. Xiaomi's success in building its ecological chain is reflected not only in its breakthrough in market

value but also in the number of listed companies and unicorn enterprises it has incubated. Additionally, its strategic expansion across diverse sectors—evolving from the "Smartphone × AIoT" strategy to the "Human-Vehicle-Home Omni ecological chain"—demonstrates its continuous growth. All of these demonstrate its outstanding performance in ecological chain construction and its exemplary role for other domestic enterprises.

Firstly, this article analyzes Xiaomi's ecological chain strategy, examining both the driving forces behind its development and its "investment + incubation" ecological chain model. Then analyze the effectiveness of ecological chain construction from three aspects: ecological collaboration, supply chain integration efficiency, and user stickiness. Finally, the study analyzes both the exemplary role Xiaomi plays for other enterprises in the ecological chain and the potential challenges it may encounter.

2 Xiaomi Corporation Ecological Chain Construction Strategy

2.1 Drivers of Xiaomi's Ecological chain Strategy Formulation

Xiaomi's strategic decision to develop its ecosystem was driven by dual factors: First, leveraging forward-looking analysis of IoT trends in 2013, it pioneered a hardware innovation platform through "an equity investment + industry incubation" model [1]. The second driver stems from its "user-centric" philosophy, which achieves both high cost-effectiveness and advanced technological features through technological democratization. This ecosystem achieves Pareto optimality in technological innovation and cost control through modular synergies and supply chain integration, ultimately constructing a network-effect-driven closed loop.

At the strategic implementation level, Xiaomi selects high-quality teams through investment, integrates upstream and downstream resources with common values, and forms an ecosystem of "Hardware R&D - E-commerce Channels - Internet Services". Smart devices of Xiaomi have covered all scenarios such as home and travel, optimizing user experience through AI data iteration. The current IoT platform connects 655 million devices and 13 million users to build an intelligent life with five-device linkage. The scale effect reduces the procurement cost of core components by 18% - 25% [2] and drives a 30% increase in R&D efficiency for ecological chain enterprises [3].

This dual-wheel drive of "trend prediction+value proposition" has not only built the largest consumer-level IoT platform, but also reshaped the industrial paradigm of intelligent hardware: at the technical level, it realizes data exchange between billions of devices; at the commercial level, it forms a hardware innovation and entrepreneurship incubator; and at the industrial level, it continuously creates marginal benefits through ecological collaboration.

2.2 The ecological Chain Construction Model of "Investment+Incubation"

Evolving continuously from the early "Iron Triathlon" strategy (hardware + software + internet), it has now established a "vehicle-home-full-ecology" strategic landscape. Xiaomi's ecological chain expansion has always followed a dual-wheel drive model of "investment + incubation".

Xiaomi adopts a minority stake investment strategy, anchoring its stake ratio between 5% and 30%. Refraining from interfering in daily operations, ensures the autonomy of the founding teams. Second, when screening enterprises, Xiaomi drives investments through its ecosystem chain in hardware, software, and service companies that complement its core business, aiming to form a full-scenario smart ecosystem. At the same time, it avoids niche and policy-sensitive markets by relying on a strong user needs-driven and reverse customization model. This approach enables the creation of a "bamboo forest ecosystem"-style ecological chain, where interconnected roots and thriving branches symbolize mutual support, thus achieving two-way empowerment between ecological chain expansion and enterprise growth [1,4,5]. Therefore, after teams with R&D capabilities and technological achievements join the ecosystem chain, they can maintain their independent development while achieving rapid growth.

Xiaomi's ecosystem incubation model establishes a collaborative system through brand empowerment, channel empowerment, and supply chain empowerment. Brand empowerment is exemplified by certified products being authorized to use the "Mijia" or "Xiaomi" brand logos [4]; Xiaomi implements a dual-channel sales strategy, where channel empowerment leverages Xiaomi Mall, Youpin e-commerce platform, and overseas channel networks. Ecosystem chain products directly reach over 686 million global monthly active users through an omni-channel (online and offline) model; Supply chain empowerment centers on economies of scale. Xiaomi coordinates over 100 ecosystem chain enterprises for centralized procurement negotiations, reducing their procurement costs. Through financial backing, it also minimizes communication and trust-building costs. Enterprises in this ecological system share supply chain resources and empower each other. Therefore, companies joining the ecosystem that align with Xiaomi's brand values, product standards, and development philosophy can directly connect with high-quality suppliers through Xiaomi's ecosystem chain, not only saving communication costs but also optimizing supply chain structures [5]. This model effectively promotes inter-enterprise collaboration and mutual empowerment, continuously enriches Xiaomi's ecosystem chain system, and accelerates the construction and improvement of the AI×IOT platform.

In summary, the underlying logic of the ecosystem chain construction of Xiaomi is "synergy." The basic model of investment + incubation has facilitated the formation of a symbiotic network. With Xiaomi at its core, this cross-industry collaboration system connects multiple stakeholders such as ecosystem chain enterprises, suppliers, users, and distributors, establishing a "bamboo forest-style" collaborative ecosystem of resource sharing and value co-creation [5]. Specifically, this ecosystem exhibits a concentric circle structure: the core layer is composed of Xiaomi's self-developed smartphones and peripheral products, which master core technologies and serve as the traffic gateway for the ecosystem. The middle layer, through investing in and incubating external teams, covers smart hardware sectors such as smart home devices, mobility tools, and wearable devices, achieving product category expansion. The outer layer extends to daily consumables and emerging scenarios, encompassing not only everyday products like towels and toothbrushes but also expanding into cutting-edge fields such as electric vehicles, robotics, and satellite communications. This layered and progressive structure not only strengthens the device connectivity of the IoT platform but also

achieves the evolution from single products to a closed-loop "vehicle-home" ecosystem, ultimately forming a multi-scenario linked ecological landscape.

3 Analysis of the Effectiveness of Xiaomi's Enterprise Ecological Chain Construction Strategy

3.1 Ecological Synerg

Enterprise ecosystem collaboration refers to the process where a core enterprise integrates upstream and downstream resources along the industry chain to form a symbiotic and mutually beneficial network system with partners. Through the efficient collaboration of elements such as technology, data, capital, and channels, the system achieves value co-creation and enhances overall competitiveness. Xiaomi has formed a 1 (Xiaomi) + N (other enterprises) ecosystem network through its "investment + incubation" ecosystem chain construction strategy. This strategy provides technical and product support for Xiaomi's "interconnected everything" development strategy, enabling products and enterprises within the ecosystem chain to develop collaboratively, enhance overall benefits, and achieve the effect of "one plus one being greater than two" (synergy) [6,7,8].

The ecological chain collaborative development strategy implemented by Xiaomi Group has attracted a large number of high-tech industries to enter the Xiaomi ecological chain. Currently, Xiaomi has invested in over 430 ecological chain enterprises, covering various industries. Simultaneously, the newly upgraded Xiaomi HyperOS system has built a standardized management platform for device protocols, effectively solving the interoperability problem of multiple hardware platforms. Therefore, seamless interconnection and functional complementarity between different devices have been achieved, significantly improving the user's intelligent experience in all scenarios. For example, in smart home scenarios, after air conditioners are interconnected with temperature and humidity sensors, they can automatically adjust the temperature; smartphones interconnected with smart door locks enable remote unlocking [5]

The more enterprises in the ecosystem, the more types and quantities of devices that can be connected to the IoT platform. As users become more dependent on the ecosystem, more developers are attracted to join, further enriching application scenarios. In other words, the expansion of IoT and the ecosystem chain exhibits positive synergy [6]. According to Xiaomi's publicly disclosed data, the data in Figure 1 were obtained through analysis, and the data in Table 1 were derived through regression analysis and correlation analysis. From this, the following conclusions are drawn: The number of devices on the IoT platform is linearly correlated with the number of ecosystem chain enterprises, with a regression coefficient of 0.028. This means that for each additional ecosystem chain enterprise, the number of connected IoT devices increases by an average of 0.028 billion (2.8 million units); the correlation coefficient R is 0.936, indicating a highly positive correlation between the number of IoT devices and the number of ecosystem chain enterprises, with consistent growth directions; the R^2 value is 0.876,

meaning that 87.6% of the variation in IoT platform device access volume can be explained by changes in the number of ecosystem chain enterprises. Therefore, the numerical growth of ecosystem chain enterprises can drive the collaborative development of the IoT platform.

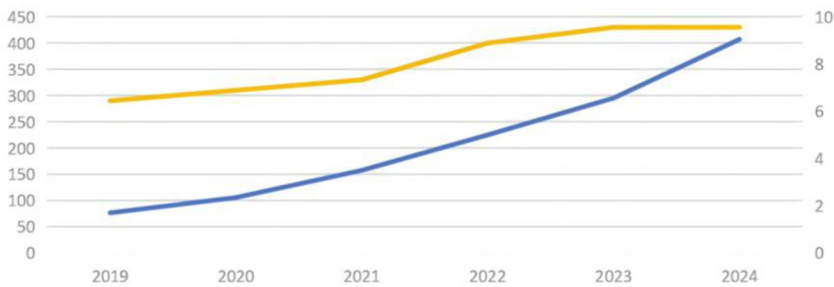


Fig. 1. The expansion of ecological chain enterprises and the growth trend of IoT device acces (Yellow: the number of enterprises in the ecological chain, blue: the number of devices) (Picture credit: Original)

Table 1. Correlation analysis between the number of IOT device connections and the number of ecological chain enterprises

correlation coefficient (R)	0.94
coefficient of determination (R ²)	0.88
regression coefficient	0.028

In addition, there is also technological synergy. Enterprises within the ecosystem chain can share resources, eliminate information silos, and enhance overall R&D efficiency. For example, Zmi smart charging devices undergo collaborative development with Xiaomi HyperOS, deeply integrating smart charging management with the operating system. They intelligently adjust strategies based on device status and power requirements to enhance efficiency and safety while optimizing device connectivity and interaction interfaces to align with the design style and user experience of Xiaomi HyperOS. This model can enhance the R&D efficiency of enterprises in the ecosystem chain, as it enables the sharing of technical resources, production resources, and supply chain resources.

3.2 Supply Chain Integration Efficiency

As shown in Figure 2, the construction of Xiaomi's ecosystem has promoted the construction of a highly collaborative supply chain system. Ecological chain enterprises have integrated over 200 core suppliers (covering key areas such as chips, batteries, and displays) through investment and strategic cooperation, enabling companies joining the Xiaomi ecosystem to share their supply chain resources and achieve win-win development for both parties. For example, in the shared resource pool of Xiaomi's ecological chain enterprises, Huami smart watches and Xiaomi mobile phones share sensor suppliers, while Zmi power banks and Xiaomi cars share battery management technolo-

gies, achieving optimized allocation of resources. This synergy mechanism has significantly shortened the R&D cycle of ecological chain products by 40% and reduced procurement costs by 20% [5,9].

Second, it has reduced procurement costs. Thanks to economies of scale [1,2,6], Xiaomi's procurement bargaining power has been enhanced. With an annual procurement volume exceeding 200 billion yuan, Xiaomi can obtain a 10%-15% price discount when purchasing key components such as OLED screens and power batteries. Lei Jun, the founder of Xiaomi, stated in a public speech in March 2024 that the SU7 can significantly reduce costs through large-scale production and ecological synergy. For example, the 9,100-ton die-casting technology has reduced the unit cost by 40%. Additionally, the 2024 financial report shows that by investing in core suppliers, Xiaomi's battery procurement costs have decreased by 12% year-on-year, and the chip self supply rate has increased to 30%.

Xiaomi has adopted an information sharing platform to manage suppliers, improving the efficiency of information sharing. By synchronizing real-time data such as orders, inventory, and production progress, delays caused by information asymmetry have been effectively reduced. For example, Xiaomi shared demand forecasting with ecosystem enterprises, which reduced supplier response time by 30%.

Downstream user data feedback promotes scenario-based ecosystem construction. Through a real-time feedback mechanism, the MIUI system's built-in user feedback APP collects an average of 250,000 pieces of data daily. For example, user feedback on the seat comfort of Xiaomi's SU7 vehicle directly prompted suppliers to adjust the foam material formulation, increasing the seat satisfaction rate from 78% to 92%. In predictive production, by analyzing user device replacement cycles and regional preferences through big data, Xiaomi adjusts supply chain capacity six months in advance, boosting its inventory turnover rate to 9.2 times per year.

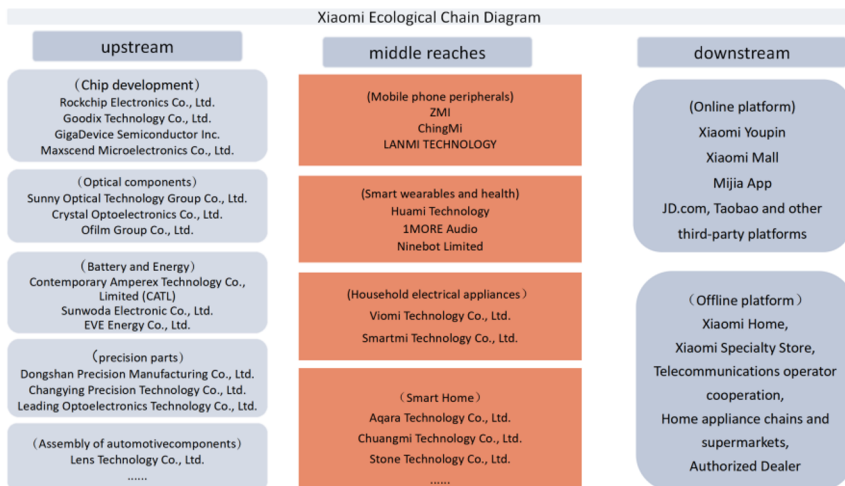


Fig 2. Schematic diagram of Xiaomi's ecological chain (Picture credit: Original)

3.3 User Stickiness

The expansion of Xiaomi's ecosystem has effectively enhanced user stickiness by building a multi-dimensional collaborative platform [4,10]. As shown in Figure 3, the enterprise's revenue structure exhibits significant differentiation characteristics: Internet services constitute the primary revenue source (accounting for 58.3%), followed by IoT and consumer lifestyle products (32.1%), while the proportion of smart terminal devices dropped to 9.6%.

The data indicates that Xiaomi has successfully established a diversified product matrix and a composite service system, achieving a strategic transformation from a hardware manufacturer to an ecosystem-based technology enterprise. Relying on the Hyper OS operating system, the company has built an intelligent ecosystem that integrates people, vehicles, and homes. Through data interconnection protocols, cross device collaboration is achieved, significantly enhancing user ecological dependence. Empirical research has shown that the synergistic effect between products can effectively drive the increase in sales of a single category and increase the demand for related products (with an elasticity coefficient of 0.78). This network externality feature has become the core driving force for the value growth of ecological chain enterprises.

As shown in Table 2, the Xiaomi ecosystem and mobile phone user repurchase rate will reach 63% and 58% respectively in 2024, far exceeding the industry average (35%-45%). The repurchase rate of household appliances is 67%. After purchasing smart homes, the consumption of car users increases by 40%. The repurchase rate of users using 5+IoT devices is 5 times higher than that of ordinary users. The Xiaomi IOT platform drives device sales growth, enhances brand appeal through diverse product categories, and creates a mutually reinforcing effect. For instance, 66% of Xiaomi SU7 car owners use Xiaomi phones, and 99% use ecological chain products, creating a "car home appliance mobile phone" consumption loop. Users have deepened their dependence on Xiaomi's ecosystem and continue to choose its products due to high migration costs, forming emotional dependence.

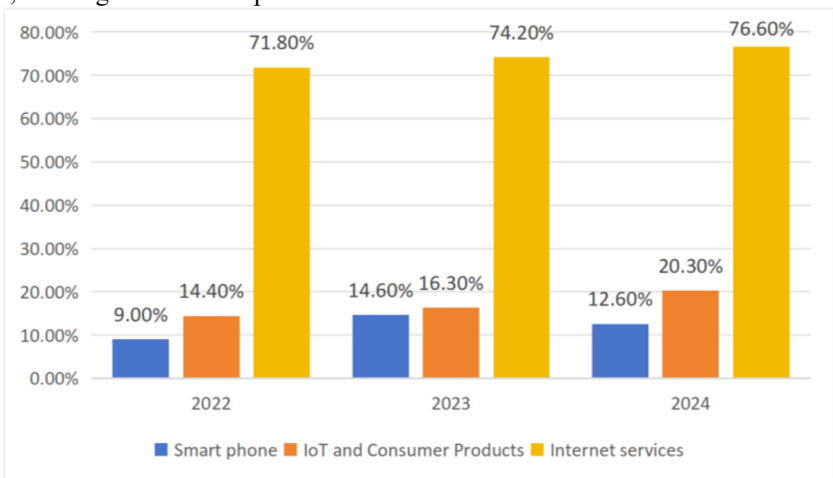


Fig.3. Proportion of Xiaomi's Performance from 2022 to 2024 (Picture credit: Original)

Table 2. User stickiness compared to industry data

Index	Xiaomi	Industry average	Huawei	Apple
Ecological product repurchase rate	63%	35%-45%	55% (relying on self-developed) 3.8 pieces	48% (closed ecology) 2.5 pieces
User device holdings	5.2 pieces	2.1 pieces	(Mobile+PC+Tablet)	(IOS equipment)
Annual consumption amount (Unit:10000 yuan)	1.2	0.3	0.8	0.6 (mainly hardware)
Member repurchase rate	82%	65%	78%	72%

4 Conclusion

Xiaomi has successfully achieved mutual promotion and empowerment of the upstream and downstream of the industrial chain through the implementation of investment strategies, incubation mechanisms, and synergies. This move not only enhances the synergy of the ecosystem and promotes the common growth of ecological chain enterprises, but also builds an Internet of Things platform to comply with industry development trends. In addition, the economies of scale and cross effects of the supply chain have significantly enhanced the overall efficiency and competitiveness of the supply chain, especially in areas such as resource integration, inventory control, and logistics distribution where outstanding results have been achieved. Meanwhile, cost-effective products and synergies between different devices greatly enhance user stickiness.

In summary, Xiaomi's ecological chain construction strategy has played a good demonstration role for contemporary enterprises, and its core demonstration value lies in providing ecological survival methods for traditional enterprises to transform and emerging enterprises to break through. Its essence is to upgrade enterprises from product providers to lifestyle definers, and this shift in strategic thinking is its most profound industry inspiration.

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