

Stability-Preserving Iteration: How Mature Companies with Stable Customer Bases Manage Innovation

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Abstract

This paper discusses how mature enterprises can promote product and service innovation without destroying the existing customer relationship in a relatively stable market environment and high customer loyalty. Different from the previous innovation path that emphasized fast trial and error and minimum viable product (MVP) in a high uncertainty environment, this paper puts forward the concept of "stability-preserving iteration", emphasizing that enterprises need to adopt more prudent and structurally matched innovation methods under the conditions of low external fluctuation and high internal path dependence. Based on the case analysis of Barnes & Noble, this paper puts forward four key mechanisms: localization matching, form consistency change, first removing friction and then adding function, and selective digital complementarity. It is found that these mechanisms help enterprises to achieve gradual upgrading while maintaining brand consistency, thus reducing the risk of customer churn. This paper provides a new theoretical perspective and practical enlightenment for the innovation strategy of mature enterprises.

Keywords

Stability-preserving iteration, mature firms, innovation strategy, customer loyalty, incremental innovation.

1. Introduction

In today's increasingly competitive business environment, innovation has become an important means for enterprises to maintain their competitive advantage. However, there are significant differences in the constraints and strategic choices faced by different types of enterprises in the process of innovation. For start-ups or organizations in a highly uncertain environment, innovation usually depends on quick trial and error, continuous iteration, and agile response to market feedback, such as the minimum viable product (MVP) strategy and lean entrepreneurial methods (Ries, 2011). This kind of path emphasizes flexibility and exploration, which helps enterprises to quickly identify opportunities and adjust their direction in an uncertain environment[1].

However, for those enterprises with a mature product system and a stable customer base, innovation logic presents different characteristics. Such enterprises have often established clear brand positioning and customer cognition, and their core competitive advantages not only come from the products themselves, but also are deeply embedded in the long-term accumulated customer relationship and brand trust. In this case, any form of product or service change may disturb the expectations of existing customers, and then lead to customer churn or brand cognition deviation. Therefore, mature enterprises should not only pay attention to technological progress and market changes, but also carefully weigh the potential risks brought by innovation when promoting innovation.

Although a lot of research has been done on innovation strategy, the relevant literature mainly focuses on two kinds of situations: one is entrepreneurial innovation in a highly uncertain

environment, and the other is the process of technological substitution and subversive innovation (Christensen, 1997; Adner & Kapoor, 2016). Although these studies provide an important perspective for understanding the driving force of innovation, they ignore the special situation of "low environmental fluctuation+high customer loyalty" to some extent. In this situation, the core problem faced by enterprises is not "how to innovate quickly", but "how to realize gradual evolution without destroying the existing value base"[2-3].

In fact, in many traditional industries and mature markets, it is often such enterprises that dominate. For example, large retailers, financial services institutions, and branded consumer goods enterprises usually rely on stable customer relationships and continuous brand awareness to maintain their market position. The innovation of these enterprises is not only constrained by the technological path, but also by the organizational inertia, channel structure, and customer expectations (Teece, 2018). Therefore, its innovation process often has higher complexity and path dependence[4].

Based on the above background, this paper puts forward the concept of "stability-preserving iteration" to describe a special path for mature enterprises to promote innovation in a stable environment. Different from the innovation mode that emphasizes radical change, this path emphasizes the optimization and upgrading of products and services through gradual adjustment on the basis of maintaining the existing value structure. Specifically, this innovative way relies more on local adjustment, structural consistency, and meticulous management of customer perception.

Focusing on this concept, this paper tries to answer the following core research questions: How can enterprises achieve effective innovation without causing customer churn or brand weakening under the condition of a relatively stable market environment and high customer loyalty? Therefore, this paper takes Barnes & Noble as an example, and through the analysis of its transformation process, summarizes four key mechanisms, including localization matching, form consistency change, first removing friction and then adding function, and selective digital complementarity.

The theoretical contribution of this paper is mainly reflected in three aspects. First of all, from the research situation, this paper expands the innovation research from the high uncertainty environment to the stable market situation, which makes up for the important gaps in the existing literature. Secondly, in terms of theoretical mechanism, this paper puts forward a set of analytical frameworks to explain how mature enterprises balance "innovation" and "stability", which provides a new perspective for understanding the gradual innovation of enterprises. Finally, at the practical level, this paper provides operational strategic enlightenment for retail and other mature industries, which is helpful for enterprises to achieve sustainable development while maintaining customer relations.

2. Literature Review

The existing research on enterprise innovation mainly focuses on three core paths: opportunity identification of entrepreneurial orientation, technology substitution and industrial evolution, and dynamic capability and ecosystem strategy. These studies explain why and how enterprises innovate from different angles, but generally focus on high uncertainty or high dynamic environment, and pay insufficient attention to "mature enterprise innovation in a stable market."

The first kind of research emphasizes that innovation comes from the process of opportunity identification, and its core lies in the influence of information distribution and knowledge structure on innovation behavior. Shane(2000) pointed out from the perspective of Austrian economics that enterprises or entrepreneurs can identify innovation opportunities mainly by their existing knowledge base. Research shows that individuals are more likely to find

opportunities adjacent to their own knowledge structure, thus forming path-dependent innovative behavior. This perspective provides important enlightenment for understanding the sources of innovation, but it is mainly applicable to the entrepreneurial situation or the introduction stage of new technologies. In mature enterprises, innovation is not completely driven by new knowledge, but deeply embedded in existing brand awareness and customer relationships. Therefore, the "knowledge base" of an enterprise includes not only technical ability, but also long-term understanding of customer preferences, brand significance, and consumption situation. This kind of embedded knowledge not only promotes the identification of innovation opportunities to a certain extent, but also restricts the direction of innovation, which makes enterprises have to weigh between "innovation space" and "customer acceptance".

The second kind of research mainly focuses on how technological progress promotes industrial change, emphasizing that innovation often stems from the pressure of technological substitution. The S-curve model proposed by Foster(1986) shows that there is a life cycle of technical performance, and when the performance of new technology exceeds that of old technology, the industry will be replaced. Further, Adner and Kapoor(2016) analyzed the speed of technology substitution from the perspective of the ecosystem, and pointed out that the substitution process not only depends on the core technology, but also is influenced by the maturity of the supporting ecosystem. This research school explains why mature enterprises have to face the constant pressure of innovation. However, this kind of research mainly stays at the level of industry or technology, focusing on "whether it will be replaced", and less on "how to specifically adjust its innovation path" when enterprises face the pressure of substitution. Especially in the situation of high customer loyalty, a radical substitution strategy may bring high market risk. Therefore, it is difficult to explain how mature enterprises can achieve transformation while maintaining customer relationships by relying solely on the theory of technological substitution.[5-6]

The third kind of research emphasizes that enterprises need to constantly adjust their resource allocation and strategic behavior in a complex environment from the perspective of dynamic capabilities and ecosystems. Hannah and Eisenhardt(2019) pointed out that in emerging ecosystems, enterprises achieve competitive advantage by coping with key bottlenecks, and their strategies are highly dynamic and adaptive. In addition, the research by Hiatt and Sine(2014) shows that in a highly unstable environment, gradual and flexible planning is often better than long-term fixed planning. This conclusion further shows that the innovation strategy needs to match the environmental characteristics[7-8].

To sum up, the existing literature has deeply discussed enterprise innovation from the perspectives of opportunity identification, technology substitution, and dynamic capability, but there is still an important limitation on the whole, that is, the lack of systematic analysis of the situation of "low environmental fluctuation and high customer loyalty". Specifically, the study of opportunity identification focuses on the influence of knowledge structure on innovation opportunity discovery, but less on the constraints of brand awareness and customer relationship on innovation direction; The research of technology substitution emphasizes the driving effect of external technical pressure on enterprise reform, but it lacks detailed explanation on how to make internal adjustment in the process of enterprise transformation; The research on dynamic capability focuses on strategic adaptation in high uncertainty environment, which is different from the stable market situation of mature enterprises. In this context, the key problem faced by mature enterprises is not whether to innovate, but how to achieve effective innovation without destroying existing customer relationships and brand awareness. Based on this, this paper puts forward the framework of "stability-preserving iteration", emphasizing that in a stable market, enterprises are more suitable to promote innovation through gradual and structurally consistent methods, rather than relying on radical

changes or rapid trial-and-error strategies. This framework not only complements the existing innovation theory, but also provides a new analytical perspective for understanding the strategic behavior of mature enterprises in specific situations.

3. Case Study: Barnes & Noble

Against the backdrop of digital transformation, the rise of Amazon has made a systematic impact on traditional physical retail, especially in the book retail industry. By improving price transparency, expanding the supply of long-tailed goods, and building an efficient logistics system, Amazon reshaped consumers' basic expectations of buying experience (Gulati & Garino, 2000). At the same time, since the establishment of the Kindle e-book ecology, digital reading has gradually replaced some consumption scenes of physical books, accelerating the migration of industry value from offline to online (Harvard Business Review, 2009)[9-10].

Under this background, Barnes & Noble (hereinafter referred to as B&N) is facing not only the pressure of technology substitution, but also the structural changes of customer behavior and consumption logic. Different from many competitors, B&N did not adopt a radical digital substitution or a comprehensive transformation strategy, but realized organizational and business restructuring through a series of gradual adjustments, thus completing the transformation while maintaining the existing customer base. This process provides an important case for understanding the innovation of mature enterprises under the constraint of a stable customer relationship.

3.1. Mechanism 1: Local Fit via Decentralized Autonomy

In 2019, Elliott Management acquired B&N and appointed James Daunt as CEO. In the face of competitive pressure, enterprises choose to delegate some decision-making power to the store level, so that stores can adjust the product structure and display mode according to local needs (The Guardian, 2023; Axios, 2023)[11-12].

Theoretically, this strategy reflects the trade-off between exploration and utilization (March, 1991). In a stable market environment, enterprises do not need radical exploration, rather improve their responsiveness to specific needs through local adjustment. At the same time, front-line employees have more situational information, and their decisions can be closer to the real market demand, thus enhancing customers' perceived relevance to products and services. More importantly, this adjustment still occurs within the existing brand framework, so it will not lead to the fracture of the overall brand cognition. This "local change-overall stability" structure helps to achieve a balance between innovation and consistency.

Proposition 1: Empowering frontline units to customize assortment and experience to micro-markets increases perceived relevance without triggering global brand shocks.

3.2. Mechanism 2: Format-Congruent Change

In the process of transformation, B&N has not fundamentally reconstructed its business model, but strengthened its core positioning as a "cultural discovery space". For example, by optimizing store display, strengthening employee recommendation, and improving space experience, enterprises can improve user experience without changing core functions (PBS NewsHour, 2025; Bloomberg, 2020)[13-14].

This strategy can be understood from the perspective of enterprise capability and business model stability. The core competence and brand awareness of enterprises often have the characteristics of path dependence (Teece, 2018), and too radical changes may lead to the weakening of the existing value base. Therefore, the gradual adjustment consistent with the core positioning is more conducive to maintaining consumers' cognitive continuity of the brand.

In addition, this method also reduces the uncertainty brought by innovation, and enables enterprises to achieve continuous optimization in a relatively stable environment, rather than one-time subversion[15].

Proposition 2: Innovation congruent with the firm's core identity preserves customer meaning while updating execution, thereby reducing the risk of loyalty-damaging brand shocks.

3.3. Mechanism 3: Friction Removal Before Feature Addition

Before promoting business expansion, B&N first optimized its internal operation system, including reducing the return process, adjusting the logic of product selection, and improving the display mechanism. These adjustments are essentially cleaning up the inefficient links within the organization.

From the perspective of organizational learning, inefficient structure and unreasonable incentives will affect the efficiency of resource allocation (March, 1991). If these problems are not solved, new services are directly introduced, which may aggravate the complexity of the system and reduce the overall operational efficiency. Therefore, in a stable market, innovation often needs to be based on internal optimization.[16]

This process also reflects the importance of gradual adjustment; that is, by gradually improving the internal structure, it creates conditions for subsequent innovation.

Proposition 3: In stable-market incumbents, prioritizing friction removal before feature addition reduces customer disruption and strengthens the economic foundation for subsequent innovation.

3.4. Mechanism 4: Selective Digital Complementarity

In the process of digital transformation, B&N does not completely rely on the online substitution mode, but mainly uses digital technology to support offline business, such as inventory management and logistics optimization. This strategy reflects the complementary relationship between online and offline (Gulati & Garino, 2000).

In contrast, Borders outsources its e-commerce business, which weakens its ability to control customer relationships (The Guardian, 2001). This difference shows that digitalization is not a one-way alternative process, but a choice that needs to be coordinated with the existing business structure.

Therefore, in mature enterprises, digital technology is more suitable as an enhancement tool than an alternative path.

Proposition 4: Incumbents preserve loyalty and brand coherence by deploying digital tools to amplify their core format rather than to substitute for it.

3.5. Mechanism Integration and Theoretical Significance

The above four mechanisms together constitute the overall logic of "stability-preserving iteration". Theoretically, the framework emphasizes that enterprises need to balance "change" and "stability" in the process of innovation. This logic is different from the lean entrepreneurial model that emphasizes quick trial and error (Ries, 2011) and the subversive innovation theory with technology substitution as the core (Christensen, 1997).

Through the analysis of B&N cases, it can be found that mature enterprises can not only respond to external shocks through radical changes, but also realize gradual evolution through structural adjustment. This provides a new theoretical perspective for understanding the innovative behavior in a stable market.

4. Findings

Based on the analysis of Barnes & Noble's transformation process, this paper identifies four interrelated mechanisms, which together constitute the core logic of "stability-preserving

iteration". These mechanisms do not exist independently, but form a complementary relationship in structure, supporting the gradual innovation of enterprises in a stable market from different dimensions.

First of all, the local fit mechanism emphasizes improving the responsiveness of enterprises to local market demands through decentralized decision-making. In the context of highly heterogeneous consumer preferences, it is difficult to achieve accurate matching of a unified operation mode, while local autonomy can enhance the relevance of customer perception, thus improving market adaptability.

Secondly, the format-consistency change is embodied in the optimization by adjusting the specific implementation mode without changing the core identity of the enterprise. By maintaining the continuity of brand cognition, this mechanism reduces the cognitive impact brought by innovation and enables consumers to accept changes in a familiar framework.

Thirdly, the friction removal prior to feature addition emphasizes the sequence of innovation paths. In a stable market, the inefficient structure and unreasonable incentives within the organization will amplify the innovation risk, so enterprises need to give priority to optimizing the internal operation mechanism to provide a stable foundation for subsequent innovation.

Finally, the selective digital complementarity mechanism shows that digital technology is more suitable as a supplementary tool to existing businesses than an alternative path in mature enterprises. By enhancing rather than replacing core business, enterprises can improve efficiency while maintaining customer relationships and brand consistency.

Generally speaking, these four mechanisms explain how mature enterprises achieve sustainable evolution in a stable environment from four dimensions: market adaptation, cognitive stability, organizational foundation, and technical path. Together, they constitute a progressive innovation logic different from the radical innovation path.

5. Discussion

The research findings of this paper have important supplementary significance to the existing innovation theory. First of all, in the research context, this paper expands the focus of innovation research from a high uncertainty environment to a relatively stable market situation. Most of the existing literature emphasizes that enterprises can realize innovation through rapid trial and error and exploration in an uncertain environment (Ries, 2011), but this paper shows that under the condition of low environmental fluctuation, innovation depends more on gradual adjustment and structural matching.

Secondly, in terms of theoretical mechanism, the "stability-preserving iteration" framework proposed in this paper makes up for the problem that the existing research fails to explain the innovation path of mature enterprises. Previous studies have explained the innovation pressure from the perspective of technology substitution (Christensen, 1997) or ecosystem evolution (Adner & Kapoor, 2016), but less attention has been paid to how enterprises adjust internally when facing this pressure. Through case analysis, this paper shows that the innovation of mature enterprises is not only the result driven by technology or market, but also the process of systematically balancing customer relationship, brand awareness, and organizational structure.

Thirdly, at the level of theoretical integration, this paper integrates different theoretical perspectives such as organizational learning (March, 1991), dynamic capability (Teece, 2018), and business model integration (Gulati & Garino, 2000), and constructs a unified framework to explain the gradual innovation of mature enterprises. This framework emphasizes that innovation and stability are not antagonistic, but can achieve synergy through structural mechanisms.

On the practical level, the research of this paper has important enlightenment for the retail industry and other mature industries. In the face of digital shock, enterprises need not simply choose radical transformation or passive response, but can realize controlled evolution through decentralized decision-making, gradual adjustment, and technological complementarity. This has practical guiding significance for many traditional enterprises under the pressure of transformation.

6. Conclusion

Focusing on the innovation problem of mature enterprises in a stable market environment, this paper puts forward the concept of "stability-preserving iteration", and through the analysis of the Barnes & Noble case, identifies four key mechanisms, including local adaptation, formal consistency change, first removing friction and then innovating, and digital complementarity.

The research shows that, compared with the radical innovation path, mature enterprises are more suitable to promote innovation in a gradual and structurally consistent way, so as to achieve sustainable development while maintaining customer relationships and brand awareness. This discovery not only expands the situational boundary of innovation research, but also provides a new perspective for understanding the strategic behavior of enterprises in a stable environment.

Although this paper provides valuable theoretical and practical enlightenment, there are still some limitations. For example, this study is based on a single case, and the extrapolation of the conclusion needs further verification. Future research can test and expand the framework of "stability-preserving iteration" through multi-case comparison or quantitative methods. In addition, the differences in customer structure and technical environment in different industries may also affect the applicability of this framework, which is also an important direction for follow-up research.

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