

A NEW ANALYTICAL FRAMEWORK ON USER-GENERATED KNOWLEDGE AND ENTERPRISE INNOVATION CAPABILITY ENHANCEMENT

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Abstract:

Users often play an important role in market research, especially in research closely related to new product development. This paper discusses the mechanism of user generated knowledge and its relationship with innovation ability, and analyzes the impact of user generated knowledge on enterprise innovation ability under different customer types, different market dynamics and different product innovation strategies.

Keywords: user-generated knowledge, knowledge integration, enterprise innovation capability

Users are the source of enterprise profits, which is reflected not only in the purchase of products by users, but also in the feedback of users' value to the enterprise, as well as in the process of knowledge sharing and integration of users, which is of great significance to the improvement of enterprise innovation ability. But at the same time, users will also share the interests of the whole value chain with enterprises, so there are conflicts of interests. Therefore, the relationship between users and enterprises in the market is a pair of contradictories, both conflict and benefit sharing. This paper aims to analyze and explore the relationship between user generated knowledge and enterprise innovation capability and its influencing factors, and analyze the mechanism of enterprise innovation capability improvement from the perspective of user types and market environment dynamics.

1 USER GENERATED KNOWLEDGE AND ENTERPRISE INNOVATION CAPABILITY

1.1 User-generated content for new product development

With the deepening of marketing concept, enterprises attach more and more importance to users. Especially with the development of the Internet, the communication between users and enterprises is increasingly in-depth. Some enterprises even set up user groups, hoping that users can generate knowledge or provide feedback, so as to promote the level of new product research and development of enterprises.

In many cases, user knowledge often plays a leading role in the development of new products in the enterprise. However, there is little literature on the relationship between new product development and UGC, much less on the impact of user knowledge on the development of new products. Nowadays, the development cycle is becoming shorter and shorter, the market competition is becoming more and more intense, the user preferences are becoming more and more diversified, and the user

knowledge is becoming more and more professional in the new economy. The integration of new product development and user generated knowledge has been widely put into the concept of enterprise strategic development.

As for the research on the relationship between new product development and user knowledge, Souder, Sherman and Cooper pointed out that R&D personnel should directly interact with users in the development stage of new product and establish a close relationship, which will be of great help to the development of new product. If new product development activities are to be effective in a rapidly changing market, companies must move beyond the traditional approach of using marketers to reach the market and focus instead on interacting with users during the new product development phase, bringing in user ideas early and integrating them with the technology and product knowledge developed. Cooper's research further shows that the evaluator of the uniqueness and superiority of a product is the user. Only by going beyond the needs of the user rather than just meeting the current needs of the user can the product be distinctive.

Recently, many enterprises have paid close attention to the influence brought by the Internet, and they have also begun to implement cooperation with users, including establishing user groups, strengthening the influence of opinion leaders in user groups, enhancing the importance of after-sales service, so as to comprehensively improve brand satisfaction, etc.

1.2 the barrier that user-generated content to new product development

We can see that not every operation that meets a user's needs will be successful.

The most important users of a company are often resistant to new technologies and new products, because these users have been accustomed to using the original technologies and products, and once changing technologies and products will inevitably incur switching costs, and users are generally unwilling to pay extra for their current satisfactory products.

They only like to make certain improvements to the original products without affecting the use efficiency of the existing products. Therefore, the enterprise has no incentive to launch new products, especially when the original products of the enterprise have achieved good performance.

In fact, many of the changes in the market are caused by the entry of new manufacturers, rather than by established manufacturers.

One of the fundamental reasons is very much, mature vendor users don't care about the new product, not because of the technological innovation ability, but users have no interest in the product change of original products, at the same time, product innovation will be the user of the existing technical knowledge is worthless, that is to say, enterprises for the current user interests make the company was eliminated by a new generation of product technology.

At this time, we see another side of the matter, that is, too much attention to the needs of users and to protect the existing interests of users may lead to setbacks in the next round of new product development.

2 DIFFERENT TYPES OF USERS' KNOWLEDGE INTEGRATION AND ENTERPRISE INNOVATION CAPABILITY

The positive and negative influences of users on the innovation ability of enterprises are also closely related to the types of users. Here, users are divided into leading users, typical users and lagging users from the time of product demand.

The concept of lead user was first proposed by Von Hippel, who distinguished lead users from ordinary users, emphasized the role of lead users in the early stage of innovation, and enabled enterprises to quickly complete the commercialization process of innovative products and services through systematic lead user research methods.

In this paper, it is believed that the leading users are the potential users who are not satisfied with the enterprise products, but still not users of the products, but pay more attention to the enterprise products, because their demand for the products exceeds the ordinary functions provided by the products.

Leading users have two basic characteristics: first, leading users stand on the forefront of market trends, so their current needs are the future needs of the market; Second, lead users expect to earn excess revenue from satisfying this demand. On the other side of the spectrum are the concepts of typical and lagging users.

The typical user is the main user of the product, they have the purchasing power of the product and consider or are using the product, they are basically satisfied with the functions of most similar products at present, and have some ideas and opinions on the improvement and enhancement of the product.

This type of users includes the early adopters who like new trends, the followers who follow trends and the rational users who are sensitive to cost performance. These users constitute the mainstream users in the

market.

2.1 The impact of leading users on enterprise innovation

Leading users have a strong incentive to get the product. The concept of a lead user is different from an "early adopter" -- the first person to buy an existing product or service. Leading users face a demand for a product or service that has not yet appeared in the market. Therefore, they must invent or specify what they need before they or others can become adopters. For example, extreme sports enthusiasts played an important role in the development of sports equipment, from windsurfing to ice climbing, that was later mass-produced by manufacturers. Companies that make surgical instruments often introduce new products under the guidance of certain surgeons who are literally at the cutting edge. These users are a different breed, and while most are happy to use the products on the shelf, there is a small group who always want to customize tools to push the boundaries of their hobby or expertise. In order to get the equipment they want, they sometimes go to a bespoke manufacturer. But more often, they modify the products they can buy. These users are known as "lead users."

2.2 The impact of typical users and lagging users on enterprise innovation

In contrast, lagging users are those who do not have high requirements for product functions and are relatively sensitive to price.

They shouldn't be on product before the advent of new products put forward higher vision, nor in the typical user buy mainstream products with dimensions, they are usually in a new generation of products have been out, end of the old product has not yet been fully into the market, then old products generally comparatively perfect on the function, within the range of affordable in price.

General low-end old product users and users of second-hand products are lagging users.

The effect of UGC on NPD performance is not only related to the type of users, but also influenced by two important factors: market dynamics and product innovation strategy.

The impact of user-generated content on the performance of new product development is related to the product innovation strategy adopted by the enterprise, which is divided into radical product innovation strategy and improved product innovation strategy.

The impact of the integration of user knowledge on the performance of new product development is related to the market dynamics faced by enterprises. According to the market dynamics, the market environment is divided into high-speed changing market environment and medium-low changing market environment.

3 USER GENERATED KNOWLEDGE ON ENTERPRISE INNOVATION CAPABILITY UNDER DIFFERENT DYNAMIC MARKET ENVIRONMENT

Different dynamic markets have moderating effects on the relationship between UGC strategy and firm innovation capability. According to the dynamic difference, this paper divides the market into high speed market and medium and low speed market.

3.1 Fast-moving market

In fast-moving markets, it is impossible for enterprises to conduct precise and detailed analysis of the possible future conditions. New product development capabilities depend less on existing knowledge and more on creating new knowledge to adapt to the environment. If the manager is still too rigid in the past knowledge, it may form the core rigidity of the enterprise and hinder the development of the enterprise. Users on the change of market environment, does not have to complete the steps to the market changes, the typical user, followed the pace of the market means to replace the product, but the typical user of the product performance, quality, style, etc have been satisfied, and replace the product paid to switching costs may be smaller than the benefits to users. This is especially true in B2B environments, where the typical user is not very motivated to pursue a new product, which makes it difficult for the enterprise to get more forward-looking opinions from the user.

In the fast-changing market environment, the better the performance of knowledge integration of leading users, the better the performance of new product development will be.

On the contrary, enterprises pay too much attention to the knowledge integration of typical users, which will easily lead to the decline of new product development performance.

3.2 Medium and low speed market changes

In the low-speed changes in the market, enterprises can predict the direction of change, the change of user preferences for products is slow, technical standard has been formed, the competitive landscape has been basically stable, can according to the enterprise existing knowledge of enterprise management and orderly market's current information plan, organize the development of new products and product innovation process.

Because users' preferences change relatively slowly in a moderately volatile market environment, companies are able to translate the knowledge of typical users into products and launch new products before users' preferences change. In the service industry, providing personalized new services for typical users has become an important means of competition. Integrating the knowledge of typical users will improve the performance of new product development in a moderately changing market environment. The knowledge of the leading users in the market also improves the performance of the firm's new product development. The leading customer is not necessarily the heavyweight customer or the conventional customer, who has a lot of questions about the current product. Their requirements for products are completely designed according to their own needs, which may require the enterprise to adjust the original product sequence to a certain extent, or add some new elements. Many enterprises do not pay attention to these

requirements when doing market research, or even ignore these requirements. Therefore, in a medium-speed changing market environment, a good performance of knowledge integration of typical users and leading users will lead to an improvement in the performance of new product development.

4 THE ROLE OF ENTERPRISE PRODUCT INNOVATION STRATEGY IN ENHANCING ENTERPRISE INNOVATION ABILITY

Product strategies can be divided into two categories: developing radical innovative new products and developing and improving innovative new products, and different product innovation strategies determine the different impacts of different user-generated content strategies on innovation ability.

4.1 Developing radical and innovative new products

Radical innovative products are very innovative compared with the market, in which innovative science and technology are applied to completely new products, or brand new technical elements are added to existing products in the market, or the original technical elements can be recombined in a brand new way of construction.

Our research found that when enterprises try to develop radical innovative new products, if the information of typical users is too much considered, it will hinder the development of new products. This is because typical users can no longer predict the characteristics of radical innovative new products, and this new product has gone beyond their needs.

Focusing on the opinions of leading users may improve the performance of new product development, which is determined by the forward-looking needs of leading users for the product and their own positive creativity.

Therefore, when enterprises develop radical innovative new products, the better knowledge performance of typical users may hinder the performance of new product development, while the knowledge integration of leading users will improve the performance of new product development.

4.2 Innovative product development and improvement

Due to the high technical maturity of innovation-oriented products, the products developed are the gradual improvement of the original products in the market or enterprises, so this kind of innovation is the most common in the market, and the competition is the most exciting.

At present, many enterprises pay great attention to collecting user feedback information after launching products, and collect user knowledge through questionnaires, telephone interviews, and setting up user service centers.

Therefore, knowledge integration of typical users can improve the performance of innovative product development.

Lead users can also play an important role in improving innovative product development.

Therefore, we believe that in the process of improving innovative new product development, the knowledge integration of leading users and typical users can improve the performance of enterprise's new product

5 CONCLUSIONS AND PROSPECTS

To sum up, the influence of users on enterprise innovation ability is increasingly important, but it presents uncertain influence:

(1) For different categories of users, the effect is different: leading users promote the improvement of enterprise innovation ability;

However, typical users and lagging users will hinder the improvement of innovation ability.

(2) under different dynamic market environment for the enterprise innovation ability also have different effects:

(a) on the change of market environment, enterprise knowledge integration, the better the performance of lead user, new product development performance will be better, too much emphasis on the enterprise integration to the knowledge of the typical user can easily lead to decline in new product development performance; (b) In the medium-fast changing market environment, good knowledge integration performance of typical users and leading users will lead to improved performance of new product development;

(3) Different product innovation strategies determine the different impacts of different UGC strategies on innovation capabilities. (a) In the development of radical innovative new products, the better knowledge performance of typical users may hinder the performance of new product development, while the knowledge integration of leading users will improve the performance of new product development. (b) In the process of improving innovative new product development, the knowledge integration of leading users and typical users can improve the performance of enterprise's new product development.

This paper mainly explores the relationship between user generated knowledge and enterprise innovation capability, considering different market environment or different innovation strategies. And other factors' impact on enterprise innovation capability should be further verified by empirical research in the future.

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