

Research on the Path of Enterprise Internet Transformation

Xin-ran HE

College of Liberal Arts, University of Wisconsin-Madison, Madison, WI 53706, USA

Keywords: Internet platform, Internet transformation, Traditional enterprises.

Abstract. Based on the perspective of resource integration and capacity enhancement, the paper explored the path of the transformation of traditional enterprises and the role which Internet platform plays in the traditional enterprise Internet transformation by multi-case study. At first, the Internet transformation path of the two enterprises is reviewed one by one. Then key nodes and generalized common points from these two Internet transformation paths are found. Finally the paper put forward the general traditional enterprise Internet transformation path, which includes four key activities—the establishment of Internet platform, resource integration, dynamic capacity enhancement and the success of the Internet transformation. Among them, the Internet platform plays a guiding and reference role in many aspects. It is helpful for breaking through the organizational boundaries as well as pushing the research of mechanism of resources integration forward.

Introduction

The Internet has brought great changes to our society—consumer demand tending to be diversified and personalized, the ever-changing information technology and the rapid changes in the market environment. The traditional enterprise Internet transformation is facing higher requirements, with the advantages of their own resources and core capabilities ever-changing. Mobile Internet appears to accelerate transformation and upgrading of traditional enterprises. Traditional enterprise Internet transformation is not self-denial and subversion, but the upgrading. Only when traditional enterprises open their mind, break the original organizational structure, break through the path which they rely on, can the transformation of the Internet realize successfully.

Based on this, the paper studied the path of traditional enterprise Internet transformation and the Internet platform's influence on breaking through the organizational inertia and realizing the transformation of the Internet. And Research results are expected to provide theoretical and practical enlightenment in resources integration and dynamic ability for some enterprises.

Literature Review and Research Framework

Literature Review

Traditional enterprises are aware of the importance of digitizing their business and making contact with consumers online, but that is not enough for the Internet transition, which is facing enormous challenges. Only when companies overcome their transitional resistance through dynamic capabilities, organizational learning and information technology, can they achieve strategic alignment successfully [1].

In discussing how to accomplish organizational reform, the analyses of academic community are mainly based on the perspective of resources and competencies: a resource perspective suggests that new resource acquisition contributes to path breakthrough in external pressure-driven [2]. The competency perspective argues that dynamic capacity is one of the most important ways for enterprises to overcome organizational inertia and adapt to new environments [3].

Research Framework

On the one hand, previous literature provides a theoretical basis and useful enlightenment for our study. On the other hand, it is the starting point of our research to analyze the blind spots of previous research. We intend to integrate the two strategies of resource integration and capacity

upgrading in the context of enterprise Internet transformation, and explore the path of enterprise Internet transformation.

Secondly, according to the idea of organizational evolution, enterprises need to change the original structure within the organizational system in the path of breaking the organizational boundaries [4]. At this stage, thanks to the characteristics of information exchange and dissemination, the Internet platform has the advantages of mediation reducing and channel sharing. Apart from this, the Internet platform also take advantage in breaking the boundaries of space, promoting communication efficiency, reducing collaboration costs, and achieving information & knowledge instantaneous flowing. Thus enterprise Internet transformation not only greatly reduces the cost of business cooperation, making the integration of resources between enterprises more convenient, but also greatly enhances the possibility of border restructuring.

In the path of cultivating new abilities, enterprises need to make the appropriate strategy to form a new competitive advantage to adapt to changes in the environment. At this stage, only when enterprises make full use of resources, and form the dynamic response to environmental changes, can they have a sustained competitive advantage.

Finally, the principle and the transformation path between the resource, ability and the enterprise Internet transformation are analyzed through case analysis. According to above ideas, the basic logic, as shown in Figure 1, which is mainly about the Internet platform promoting the traditional enterprise Internet transformation, is formed: firstly, enterprises use the Internet platform to find and access key resources; secondly, enterprises need to cultivate new abilities through the integration and efficiently use of resources; finally, the traditional enterprise Internet transformation can be realized.

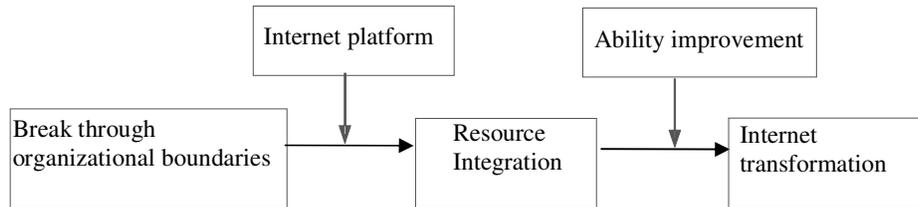


Figure 1. Theoretical framework.

Research Methods and Research Samples

Research Methods

The paper explored this problem by exploring the path of corporate Internet transformation. The research problem is exploratory and explanatory, and the case study is suitable for analyzing such problems [5]. At the same time, multi-case studies follow the principles of replication logic, in comparison with single case studies, so the conclusions are more convincing and universal [6]. Therefore, the main research methods are theoretical research and multi-case study.

Research Samples

Based on the multi-case copy logic, firstly two cases are chosen from the field of Internet medical and Internet manufacturing. The key information of the case enterprise is shown in Table 1. In China, medical treatment problems are prevalent everywhere. Nanjing Internet medical reform is in the forefront of other provinces and cities, and a clear business model is formed in Nanjing, so we chose Nanjing Internet medical transformation as a research object for analysis. Haier Group (Haier), founded in 1984 in Qingdao, started on producing a single production of the refrigerator, expand to home appliances, communications, IT digital products, home, logistics, finance, real estate, bio-pharmaceutical and other fields, which gradually transformed into a platform for manufacturing from a manufacturing products company. This is the reason why we chose Haier Group as a manufacturer of Internet transformation on behalf of the enterprise.

Table 1. Key information of the case enterprises.

Enterprise	Industry	Main business before the transformation	Main business after the transformation
Nanjing medical institutions	Medical industry	Traditional medical services	O2O medical treatment
Haier	Manufacturing	Household appliances manufacturing enterprises	Open innovation enterprise

Data Collection

The paper explores research issues through using multiple channels to collect relevant information. The sources of this case study include first-hand information such as in-depth interviews, informal interviews and on-site observations, as well as second-hand information obtained through corporate websites, social media reports, and internal archives.

Case Analysis

Nanjing Medical Reform

(1) Promotion of registration platform. They not only cooperate with the hospital, communications operators to provide public with appointment registration by mobile phones, television, self-service terminals and more, but also cooperate with the bank, providing appointment registration services to the public in the bank self-service machine. (2) Promotion of self-service medical service platform. In 2015, the Nanjing hospital established and improved self-service medical service platform of the major hospitals in Nanjing, accomplishing the hospital internal medical information resources integration. (3) Establishment of Nanjing Public Health Management Platform. The public health management platform integrated the medical information resources in the region. For the patient, the self-health management closed-loop records patient all information before, during and after diagnosis. For the doctor, the inter-regional closed-loop includes prevention, treatment, rehabilitation functions. (4) The establishment of cross-sector information exchange platform. A series of information exchange platforms of medical & health, civil affairs, social, drug, financial and other relevant departments are established, so the goal of sharing cross-industry and cross-regional information resources is achieved. Among them, the innovative medical insurance payment model is an important content of Nanjing wisdom medical project.

Haier's Internet Transformation

(1) The transformation from large-scale manufacturing to mass customization. Haier is an enterprise with emphasis on innovation. As early as 2005, Haier, adapting to the user personalized trend, tried to modularize to meet the individual needs. In this way, the users can select their own functions and services which they need, and products are customized on demand, achieving good results. (2) The transformation from closed innovation to open innovation. With the growing variety of user needs and the greater pressure of peer competition, modular customization is not enough. In this context, external ideas and internal creativity are at the same important position in Haier, which balanced coordination of internal and external resources to innovate. Haier has established an open multilateral innovation platform that breaks the barriers, spans time and space. The platform includes three sections: the user interaction platform, the technology resource platform, and the creative community (the platform architecture shown in Figure 2), which designed to allow technology demand side and technology holders can be barrier-free docking in the platform.

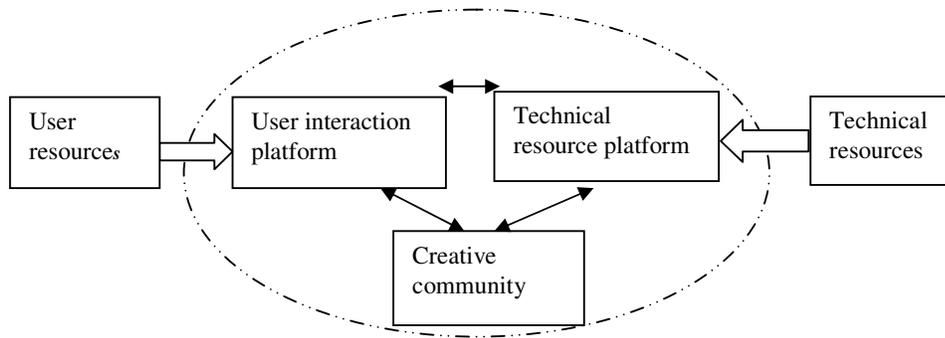


Figure 2. The architecture of Haier open innovation platform.

Through the user interaction platform, the user's needs and pain points can be found by real-time R & D personnel, start customers, businesses and investors. The technology resource platform is a platform for technology providers to display technology. There are currently more than 100,000 technical resources registered in the platform. The creative community is a bridge between users and technical resources, designed to provide the technology and resources match with the two, contributing to the transformation from the creative to the ordinary products.

Analysis Conclusion

Path of Traditional Enterprise Internet Transformation

There are essential differences between Nanjing Internet medical and Haier's open innovation, whether it is in the region, the industry, or the interests of the main body, but the transition path is similar to each other. Among them, the establishment of the Internet platform and resource integration throughout the four stages of Nanjing hospital network transformation. The transition path can be summarized as follows: the construction of multi-level Internet platform -> the scope of the integration of resources to expand -> resource integration to bring medical service capabilities continue to improve -> Internet health care reform success, as shown in Table 2.

Table 2. The Integration of Medical Resources and the Promotion of Capacity in Nanjing.

Stage	Internet Platform	Resource Integration	Improvement of Medical Service Capacity
1	Registered platform	Hospital internal information	Internet registration service
2	Self-service medical service platform	Information about the entire process before, during and after diagnosis	Closed-loop self-service medical services
3	Public health management platform	Regional medical and health information resources	Disease prevention, referral, hierarchical medical and other services
4	Cross-sector information exchange platform	Information about health, insurance and social	Real-time payment for health care costs service

Although Haier's Internet transformation is not a phased forward like the Nanjing Internet health care reform, but its core work is still the establishment of the Internet platform and resource integration. Haier Internet transformation path is: the construction of open innovation platform -> integration of user resources, technical resources and enterprise resources -> innovation capacity rising -> Internet transformation success, as shown in Figure 3.

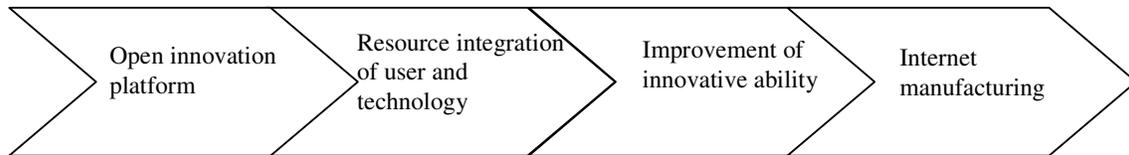


Figure 3. Path of Haier Internet transformation.

The Internet Platform Is a Breakthrough in Breaking the Organizational Boundaries

Whether it is Nanjing's Internet health care reform, or Haier Group's open innovation platform construction, the key to success is to break the traditional bureaucratic organizational structure, implement self-organized, flat organizational structure in the organizational structure. Traditional enterprise Internet transformation is a path of centralization, of which the primary work is to make organizational structure flat. But, when enterprises operate and promote the platform, cultivating the Internet thinking of the staff is a long-term project. The core of the Internet platform is openness, innovation, equality and self-organization. This is the problem which Internet platform operators need to face.

Conclusion

The paper reveals how the traditional enterprises use the Internet platform to achieve Internet transformation path selection from the perspective of resource integration and ability to enhance. The paper summarizes the four key points of the transformation of traditional enterprise Internet, including the establishment of Internet platform, the integration of resources, the improvement of dynamic capability and the transformation of the traditional enterprise.

But there are some shortcomings. In the paper, the influence of other factors on the Internet transformation of traditional enterprises was neglected, such as the government's macro-control, organizational inertia and so on. The future research will further explore the principle of these factors on the traditional enterprise Internet transformation and put forward more systematic and perfect transformation path.

References

- [1] Karimi, J., Walter Z., The Role of dynamic capabilities in responding to digital disruption: a factor-based study of the newspaper industry, *Journal of Management Information Systems*. 32(2015)39-81.
- [2] Besson, P., Rowe F., Strategizing information systems-enabled organizational transformation: a trans disciplinary review and new directions, *Journal of Strategic Information Systems*. 21(2012)103-124.
- [3] Teece, D.J., Pisano G., Shuen A., Dynamic capabilities and strategy management, *Strategic Management Journal*. 18(1997)509-553.
- [4] Campbell, D.T. Variation and selective retention in socio-cultural revolution, *General Systems*. 14(1969)69-85.
- [5] Eisenhardt, K.M., Building theories from case study research, *Academy of Management Review*. 14(1989)532-550.
- [6] Yin, R. K., *Case study research: design and methods*, first ed., Sage Publications Inc., CA, 2008.