

Tactics to Develop the Internet Industry Against the Big Data*

Zhihong Li
Business School
Jiangnan University
Wuhan, China 430056

Abstract—The Internet business has got to a brand new stage under the big data. Also, due to the internet, the big data have been much more widely applied than ever before. The quick development of the big data has given both opportunities and problems to the internet industry. To further use the big data technology in the internet business, the paper first expounds the development situation of the internet businesses, explores the relationship between the internet and the big data, and then analyzes the existent problems to develop the internet business under the big data. Finally, some tactics to better develop the internet industry are presented.

Keywords: *tactics, internet industry, big data*

I. INTRODUCTION

In recent years, the internet businesses have been developing rapidly with a gradient style. The first echelon businesses include the large listed companies like Alibaba, Netease, etc. And then the medium scale internet businesses such as Quick Taxi and Mogujie.com, etc. come next. The third echelon firms are the small enterprises like Petal Net and so on. The internet businesses have greatly changed the production and life model with their convenience, timeliness and cost-saving. With the fast growth of the big data from 2015, the internet enterprises meet with many problems in their further expansion. It's quite necessary to study the features to develop the internet business in the big data environment so as to find matching paths of the internet industry.

II. ACTUAL SITUATION OF THE INTERNET BUSINESSES DEVELOPMENT

In China, the internet enterprises to be developed fastest are in Hangzhou, where numerous emerging internet firms are born and grown up. Alibaba Network Technology Co., Ltd, founded in 1999 by Ma Yun, is the distinguished representative. Its main businesses consist of Alibaba cloud computing, taobao.com, 1688, Ant Financial, etc. In 2014, it was listed formally in The New York Stock Exchange with a

stock ticker of "BABA". In 2015, its total revenue got to about 94.38 billion yuan with a net profit of 68.84 billion yuan. The other internet enterprises like Netease, Mogujie.com and so on have been running various businesses. These businesses concern games, animation, tribunal, social contact, e-commerce for fashion women and so forth. They have contributed much in changing the life style, contact ways and communication, etc. However, in recent five years, with the big data widely applied, some problems come out and affect the further expansion of the internet businesses.

III. RELATIONSHIP BETWEEN THE BIG DATA AND THE INTERNET

The big data refer to the data clustering that can't be captured, managed and dealt with the common software in certain period. As massive and fast growing information assets, they can better serve us in our decision, insight, etc. They have the characteristics of volume, velocity, variety, value and veracity [1]. In all walks of our life, economy and society, information is quite complicated and we should try to find out their inherent laws by hunting, analyzing, inducing and summing up to make a better use of them. Anyway, it is impossible for the human brain or a single computer to handle the big data. We must use the cloud technology like cloud computing, cloud storage and virtual technology to calculate and estimate [2]. Just as Viktor Mayer-Schonberger [3] says, the real value of the big data is like an iceberg floating in the ocean. When you first spot it, you may only see its angle, for most part of it hides under the water. The big data and the internet complement each other. First, the internet has been providing countless data, digits, information and documents for the evolution of the big data. Currently, the data metering unit has been from Byte, KB, MB, GB, TB to PB, EB, ZB, YB even to BB, NB, DB. The internet is the push of the big data. Second, the development of the big data has been offering the internet many more service, supports and applications. With the big data, the use of the internet is greatly expanded into all the fields of the human being such as politics, economy, military, environment, science and technology, etc.

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IV. PROBLEMS EXISTING IN THE INTERNET INDUSTRY AGAINST THE BIG DATA

A. Serious shortage of the skilled personnel for the Internet industry

Currently, over half of the internet skilled personnel are attracted and remained in the several large internet enterprises like Alibaba, Netease, etc. The medium small internet firms are quite short of the internet professional skilled personnel. As a result, a few large internet enterprises keep most excellent internet personnel and the medium small firms can only hire those who have left from the large internet company, because these internet personnel, after having working experience and funds accumulation, usually dismiss and open their own businesses.

B. Grave homogeneity in entering the e-commerce market

As the internet and big data evolve, e-commerce businesses have been mushrooming. The development of the e-commerce makes new business model born, serves the manufacturing enterprise, flourishes the market and brings much convenience to us. But its high profitability and low threshold of entry have attracted numerous entrants, which leads to the situation that large quantity of the funds are invested into the e-commerce which may hinder the further development of the other elementary sectors. Take it for example, 50% e-commerce businesses in China were clustered in Zhejiang Province in 2014, especially, of global 100 strong e-commerce businesses, 3 strong companies are in Hang Zhou, with which the e-finance firms like Ant Finance, Ai Xue Dai.com, etc. are gathered here, too.

C. The Internet infrastructure in different regions is to be improved

The big data are driving the internet to be used in the fields like industry, agriculture and tourism and so forth. However, these fields most locate in the relatively remote area, where the net infrastructure or system is not enough to support the internet technology requirements. In some remote areas, even no network is reached, which directly hinders the data collection. Without data, the big data technology can do nothing for the internet.

D. The laws and regulations on the Internet under big data are to be formulated

The internet business concerns buyers, sellers, financial institutions, governments, certification and distribution centers, privacy and various information security, etc. Currently, some regulations have been made in some countries or regions, but the systematic laws and regulations for the trans-departments, trans-regions or even trans-nationalities are still to be set up. After all, the internet business has been making the whole world become a global village, let alone under the big data.

E. Low integration among the Internet and the industry and the agriculture

At present, the internet is fully used in the commerce, but its usage in the industry and in the agriculture has much to be improved and expanded, especially in the industrial and agricultural production. The big data have given the chance for the internet to extensively serve the industrial and agricultural production. The big data technology like data collection and initial processing, data cleaning distributive storage, machine learning and parallel computing, etc. will greatly push the internet to further enter into the industrial and the agricultural production and to change the correspondent processing model. Under the big data, the internet will be shifted from the value realization to the value creation.

V. TACTICS TO DEVELOP THE INTERNET INDUSTRY UNDER THE BIG DATA

A. Scientific management of the skilled personnel's competence

Under the big data, the internet industry needs more comprehensive skilled personnel than the single professional ones. The administrators of the human resources in the internet enterprises should strive for combining the staff's competence [5] with the internet business in their evaluation and compensation system so as to maintain the excellent people both in the competence and quality. Then, strengthen the construction of the core skilled personnel pool and open suitable career development paths, for example, regularly organize the professional training to make the staffs raise their skills and to seamlessly connect their career with the business of the enterprise. Next, the enterprise should set up its own recruitment website, further make the human resources management information system improved so as to provide the reliable foundation for the strategic decision adjustment in different stages of production and operation.

B. Expanding into the value creation link in the value chain

Whether at home or abroad, at the start, the internet business is concentrated in the link of the value realization, namely, in the market exchange domain, which leads to a serious homogeneity in the investment. More inputs into the value realization section affect the value creation section. Seen in the angle of the whole industry, the value creation or the production of the outputs with good quality will be hindered. Dwelling on side issues is sure to cause a lag-behind of the industrial and agricultural production upgrade in the long run because of the shortage of the investment. So, the internet industry should make the strategic industrial policy, guide the enterprises to sink into the production section of the value chain so as to obtain a harmonious development of the whole internet industry, not only to remain in the market exchange.

C. Consolidating the construction of the information infrastructure

Under the big data, the internet enterprises should be transformed to the intelligent digital organization, integrate digital technology, self-adaptation into their own business and set up the basic information platform matching the big data. Also, try to find a business model suitable for their own business portfolio, minimize the cost while meeting the customer's needs so as to jump out of the rival competitive red sea and to find out a niche market in the blue sea with the help of the big data.

D. Systematic laws and regulations to match the Internet business under the big data are to be made

Since 2015, the internet industry in China has got to the first rank in the world, for example, the exchange rate of e-commerce in China reached 20.8 trillions yuan and its industrial scale was at the top of the world [6]. But now, some laws like Anti Unfair Competition Law, Intellectual Property Law which are applied in the internet industry are still the traditional ones. The internet industry, especially under the big data, needs its own regulations such as electronic signature law and personal information protection law, etc. to regulate its particular issues. Only in this way can the internet industry be effectively supervised, assure the legal benefits of the economic activity participants and be trusted by the public.

E. Strengthening the use of the Internet in the industry and agriculture

With the establishment of the big data analysis system in the fields like medical, transportation, public security, people's life, shopping, etc. the use of the big data has been shifted from the data intensive sector like telecommunication, finance, etc. to non-data intensive sectors like the small store on the street side. Now, the internet has been widely used in the commerce. Under the big data, the internet is trying to be integrated with the industry and with the agriculture, namely, the industrial internet and the agricultural internet. The industrial internet means that equipment, production lines, factory, suppliers, outcomes and customers can be closely linked and integrated by way of the industrial internet platform. This linkage is trans-equipment, trans-systems, trans-regions and trans-factory, which can greatly raise the efficiency to share the resources in the manufacturing industry [7]. The agriculture internet refers to intensifying the agricultural development by way of applying the internet technology, the big data technology in the agricultural production, processing and sales, etc. These technologies can raise the outcome levels by reforming the production linkage, control the production and operation as to assure the product quality. With these technologies, new business models based on the agriculture may be invented, such as the agricultural production management, the network sales of the agricultural outcomes, e-payment and e-logistics management. Whether in the industry or in the agriculture, the real supervision with the internet of things will be possible. The just-in-time agriculture with fewer costs and higher outputs and the

distributive industrial production can be realized through the big data forecast. In particular, consumers have many more chances to obtain the relative information about the agricultural and the industrial products through the internet, mobile network and social network and can be active in joining in the various links like production, sales, etc. Synchronous information between producers and consumers will push the made-to-order farming and made-to-order processing widely and deeply.

VI. CONCLUSION

The internet development makes the big data possible and accessible. Also, the development and application of the big data pushes the internet business to go far beyond the people's imagination. These two complement each other. It is quite important for us to overcome the difficulties of the internet business met with under the big data. In this way, we can fully make use of the big data technology in the internet business and accelerate the application of the internet in the other sectors like production, manufacturing besides marketing and commerce.

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