Big data: Challenge or Opportunity

XIYUE ZOU*
Shanghai Lixin University of Accounting and Finance, China

Abstract

Here is a story that can vividly depict what is big data: Mr. Chen made a phone call to Pizza Hut.

Customer service: *Hello,this is Pizza Hut, What can I do for you?*
Mr.Chen: *Hello, I want a pizza.*
Customer service: *OK, Sir, Please tell me your membership card number.*
Mr.Chen: *16846146****
Customer service: *OK, Mr.Chen, what do you want?*
Mr.Chen: *A seafood Pizza.*
Customer service: *I'm sorry, Mr.Chen, the seafood pizza may not suit you.*
Mr.Chen: *Why?*
Customer service: *According to your medical record, your blood pressure and cholesterol are high.*
Mr.Chen: *Wow, how do you know that?!*
Customer service: *Because we are online CRM system.*
Mr.Chen: *Do you have any suggestion?*
Customer service: *You may like our low fat healthy pizza according to your book records that you borrow a < Low fat healthy recipes>last week in the National Library.*
Mr.Chen: *That's right. I want a large pizza.*
Customer service: *The large one may not enough. Mr.Chen: Why?*
Customer service: *Because there are 6 persons in your family, the XL may be good.*
Mr.Chen: *OK, how much is that? Customer service: 299 yuan. Mr.Chen:Can I use credit cards?*
Customer service: *I'm sorry but your credit card has been exploded and now you owe the bank 14700 yuan which not include your mortgage.*

As if just overnight big data has been quietly penetrated into every corner of our lives and we unconsciously or subconsciously deliver our personal information and express personal habits when we use cellphones or in many other situations that are related to Internet. Business are increasingly users, and even producers, of large datasets with potentially sensitive information. Some business researchers have for decades handled such data like Census data, and routinely think and then quietly set off an information revolution which can make their business better touch customers' habits thus greatly improve efficiency of trade.
This paper proceeds in four steps. First, it offers lessons what is big data and how it operates. Second, it provides an example of Alibaba group to explore the benefits and opportunities that big data brings to business. Third it shifts gears and discuss privacy and the related challenge for business.

Keywords: big data opportunity challenge

* **Email:** blairhathaway@163.com

1. Introduction of big data

Speaking of what is big data, I want to firstly introduce what is not big data：

① big data ≠ possessing data. Many people think that having the data, especially a lot of data, is large data. This is certainly not right, a large amount of data is not large data, such as large meteorological data, if they are only for weather forecast, they could just be handled with enough computing power, but this kind of usage is still far from playing its value. By contrast, the insurance company predicts natural disasters and adjusts the premium rates associated with natural disasters based on large meteorological data which evolves other commercial values and creates a large business environment. Therefore, only when big data is used, associated with each other, and even exchanged to produce real value, can it form the unique DT era of business.

② Large data ≠ reporting platform. Many companies announced that they have achieved a large data with the establishment of their own business reporting center, or a data center, but this is far from enough. Although the report is also a large data of a reflection, the real large data is a system in which all things are both data producers and data users and they automatically learn and adjust through the automation and intelligent closed-loop system, thereby enhancing the overall production efficiency.

③ Large data ≠ calculation platform. Admittedly, large data computing platform is the data base of large data applications and an indispensable part of the closed-loop large data, but possessing a calculation platform does not equal possessing big data.

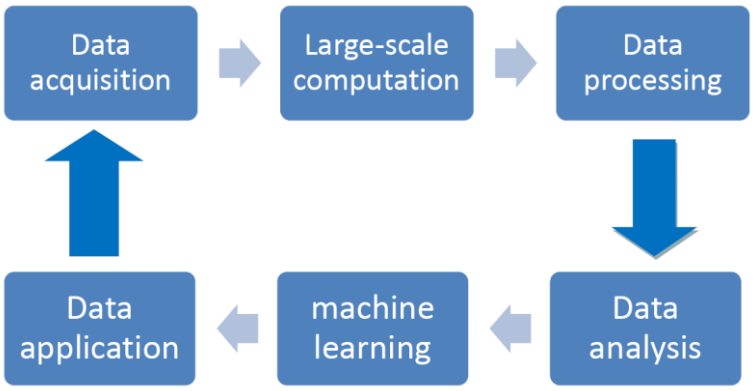
④ Large data ≠ precision marketing. In fact, precision marketing is the final segment of the closed-loop system of big data. Business could obtain more competitive edges through precision marketing which is realized by the three steps mentioned above.

To sum up, it is not difficult for us to find out that even though the possession of big data, calculation platform, reporting platform, and precision marketing do not directly equal to big data, they together consist the complete system of big data. Data in the financial, advertising, retail, logistics, film and television industries is quietly changing our lives. The popularity of mobile phones, or the ever-changing wearable equipment, smart home, and even unmanned vehicles reminds us that the big data is leading us to a new age— the DT era. The first two age in human history— agriculture age and industrial age respectively rely to land and capital as the production factor. Now the data will become the core of the production factors of the new age, as its name.

In the future, the data will become the most important resource for business competition. People who can better use the big data will lead the next generation of business trends. So no data, no intelligence; no intelligence, no business. In the next part, I will cite Alibaba as an example which is the biggest and one of the most successful Internet entrepreneurs in China.

2.1 Introduction of Alibaba

Alibaba group mainly consists of Taobao, Alipay and Ali cloud. Taobao is one of the biggest online shopping platforms in China while Alipay is the biggest third-party payment platform and Ali cloud is a cloud computing services provider who specifically offer Alibaba group cloud computing service. Following is the Data production chain of Alibaba:



2.2 Benefits

The benefits that Alibaba company obtained from big data could be concluded as follow:

2.2.1 Progress in the big data application

The big data application of Alibaba group moved from the inside of the business to the outside. According to the statistics of Sohu, the sales of Taobao in the every year sales day— "double eleven" has increased from 5.7 million in 2014 to 120.7 million in 2016. Taobao has already become the leader of online retailer in China. In fact, behind these beautiful statistics, the real treasure of Alibaba group is their massive transaction data and the relating application technology. In 2005, Alibaba publicize their first data processing product "Tao data" which was mainly used as a reporting tools to improve their service quality. In 2009 their big data application began to move to the outside and in 2011, their first outside data processing product "Data cube" was publicized, through which businesses can directly access the macro industry situation, optimize products according to the changes in the data in a timely manner, thereby increasing sales. In 2012, Alibaba combined the whole group's strength to research and develop a big data business product to provide big data service to their own online retailers. After the foundation has been built steadily in e-commerce, Alibaba expanded business to financial sector. Alibaba finance use its own big data advantage to conduct risk assessment for Taobao, Alipay, and businesses on B to B platforms thus they could timely understand of their solvency and reduce the risk of bad debts. Meanwhile Alibaba also sought to use large data to solve the problem of logistics congestion during the peak of shopping. Alibaba succeeded in using big data to optimize the logistics, achieve business, logistics and consumer information linkage, and create a nationwide open logistics infrastructure during the "double eleven" in 2013.

2.2.2 New ideas of big data

The most important thing in the experience of Alibaba's success is that it really has a big data thinking about the value of the data. Based on the understanding of consumers, business not simply do market research, but give insight into the market through a precipitation of data. The first stage of application of big data is the data operation stage, people consciously collect and sort data, make good use of data and let it produce value. The second stage is the integration of data and corporate strategy, enterprise systematically collect and manage data, and view the value of big data from various angles.

As a user of Taobao, I gradually find that this online shopping platform is becoming more and more intelligent. Every time I open the APP, search for some products and browse some shops, the APP will collect all the recordings and recommend some products which may be best appealing to me when the next time I open it. It turns out that the products it recommends to me really attract me thus the possibility that I buy something every time I open the APP increases a lot. Alibaba not only promotes products, but also researches network consumers through big data analysis and divide consumers into different groups through the user's registration information, browse information, and consumer information to find a larger customer base. If the previous data research was based on the product as the core, then the study of large data age is to break through this tradition, make consumers as the core, and view the data from multiple dimensions, especially from the point of view that was not noticed before thus the potential of the market is dug out. This is a new way to view data.

2.2.3 Personnel team building, organization system support

Carrying our big data business needs enough brainpower so Alibaba has set up a post of CDO(Chief Data Office) to promote data platform sharing strategy, meanwhile, among the approximately 20 thousands employees in Alibaba, there are more than a thousand of people who engage in the data work. In Alibaba, there are not only data analysts whose work is to provide advice supports to the decisions of different departments and even the corporate, but also data scientists whose work is to develop professional data products to support sales. Data scientist not only is the key point of the talent plan of Alibaba, but also will become one of the hottest professionals in ten years. In fact, Alibaba sets the big data department as strategic sector which is directly lead by the CEO and builds a big data committee across the various departments to guide and coordinate the operation of various departments. From the employment of the first data analyst to the formation the first data analysts group, from the formation of the first data department-BI to the formation of the big data committee, the big data talent team and organization of Alibaba is maturing and there is no surprise that Alibaba could become the leader of Chinese E-commerce.

3. Challenges

In big data age, as the amount of data increases, the risk of data is also increasing, thus the biggest challenge for companies who want to maintain a strong competitive

edge is to build a complete big data security management. The most sensitive issue now about big data is privacy disclosure because users of those online services need to offer some of their personal information when they register and if those online service providers cannot ensure the security of these data, users would not trust them anymore.

In 2010, Taobao announced to open data to the world and developed two principles: data is opened hierarchically, and data that related to the privacy of consumers and sellers will be absolutely protected.

As for Alipay which is quasi - financial industry is comparatively much more sensitive than Taobao, therefore Alibaba group set up a special evaluation team to determine the whether the data should be made public and to what extent. Besides, any department in the company that needs to use these data is required to apply for permission. All these measures taken by Alibaba Group provide a strong guarantee for the data security management.

4. Conclusion

The future will become the age of data so people who can control it will gasp the future. Simultaneously, various challenges in the process are inevitable. The success of Alibaba success may not be copied, but there is much experience could be learnt. Businesses should learn to view big data from various angles and explore their own way to apply big data.

References

Cai Jun. Big Data: Digging Data from a New Perspective - An Interview with President of Alibaba Big Data Committee [J]. Communications World, 2013 (14): 18-20.

Chen yi. Application of Alibaba's Big Data Marketing [J]., 2016 (9): 193-193.

Jin yiyuan (School of Economics and Management, Shanghai Jiaotong University, Shanghai 200092, China); Discussion on the New Development Direction of Internet Enterprises under Large Data Patterns - Taking Alibaba Group and Tencent Holdings Limited as an Example [J]. Urban Construction Theory Research, 2014 (11).

Wang Ke.Study on Small Micro Enterprise Financing Model Based on Big Internet Data Platform - Taking Alibaba as an Example [D]. Chang'an University, 2014.