

Exploration of the Influence between Network Environment and Enterprise Accounting Using Computational Model

Chao Li

Email: 624299703@qq.com

School of accounting, Wuhan Qingchuan University, Hongshan District, Wuhan City, Hubei Province, China

Abstract: With the continuous development of China's economy and science and technology, network information technology has also been applied in the field of enterprise accounting, which provides positive guidance for the majority of enterprise management and decision-making personnel, and provides effective reference materials for enterprise accounting. In the network economy environment, the use of the Internet business has the basic characteristics of efficient and convenient, which brings many opportunities and great challenges to the efficient development of enterprise accounting management. Therefore, this paper focuses on the analysis of the current network economic environment, some problems existing in the enterprise accounting work, the use of algorithm model (computational model) to collect data, and put forward targeted technical improvement and optimization of the perfect countermeasures, hoping that this paper can improve the need to engage in enterprise accounting related work personnel technical level to provide some inspiration and reference.

Keywords: Network environment; Enterprise accounting; Information technology, Computational model

1 INTRODUCTION

As a social science, accounting theory and accounting practice should be based on objective socialist economic environment and theoretical system (Zhao, 2015).

At present, the high-tech emerging industries mainly represented by computerized computing and computer information technology products have achieved explosive growth in geometric order. Some emerging industries mainly based on the application of modern science and technology have gradually occupied a dominant position in the development of network economy and society in today's world, and directly promoted the steady development of network economy in today's world (Luo, 2013). The rapid development of basic information technology of industrial network economy indicates that human economy is transitioning rapidly from the old era of industrial network economy to the new era. As an important foundation for the development of network economy, network is profoundly changing various traditional economic work modes of human economic society (Wei, 2007). All these challenges greatly the accounting theory and practice of the traditional enterprise accounting management work. The

traditional enterprise accounting theory is mainly based on a series of basic assumptions, namely, the accounting entity accounting hypothesis, the continuing operation accounting hypothesis, the accounting period accounting hypothesis and the monetary accounting hypothesis (Wei, 2007 and Hu, 2015). But most of the four basic assumptions of traditional enterprise accounting cannot adapt to the modern characteristic socialist economic management environment, and through modern accounting management practice, it has proved that the traditional enterprise accounting is not reasonable (Tian, 2015 and Zhang, 2003).

Network, on the one hand, is an important carrier of the dissemination of modern information technology, on the other hand, it provides a new information place for the daily production and operation management activities of Chinese enterprises, and creates a new market economy and social organization and production and operation mode, which completely changes the traditional enterprise management mode and market transaction mode. Information resource management is mainly the real-time capture of new information technology and e-commerce information. Combining these information technologies with the distribution of enterprise information resources is a process to effectively help an enterprise achieve the maximum efficiency output. Therefore, this process is extremely important for an enterprise. The environment of network economy provides good development opportunity for the appearance of Chinese network enterprise accounting.

The rapid emergence of the Internet has brought about significant changes in the structure of the information management system of culture, economy and politics in human society. First of all, e-commerce has become an important form of commercial management in the Chinese network times and pushes enterprises to continue to survive (Zhang, 2003 and Zhao, 2013). Secondly, the daily operation and production management information of enterprises are integrated in the way of online e-commerce. As an important subsystem of economic and social information system in our country, the development of enterprise accounting information system has been influenced by the most direct and profound social influence (Zhao, 2013). The replacement carrier of accounting processing data has changed from traditional paper material to magnetic medium and metal photochemical medium. This way of information replacement fundamentally eliminates the important technical complex links of information classification, regeneration and classification in the process of accounting information processing, so as to provide unlimited free development space for the information classification, reorganization, regeneration and classification, reclassification and reclassification of enterprise accounting data (Liu, 2013 and Yu, 2019 and Liu, 2014).

Program listing or program commands in text should be set in typewriter form such as Courier New.

2 COMPUTER INFORMATION PROCESSING MODEL (ZHU, 2008)

The module used in this paper is the core of MapReduce calculation model, which mainly completes the rule design and calculation function of transaction logic. The parallel programming model of MapReduce is convenient and efficient for computing association rules of Web logs, and it is easy to implement related statistical transactions. Different transactions

have different statistical rules, but they are implemented in the same way. Let's introduce this parallel programming model with a transaction process in action.

1) Define Mapper to process input Key-Value pairs and output intermediate results.

```
public static class Mapclass extends MapReduceBase implements Mapper {
    private final static IntWritable one = new IntWritable (1);
    private Text word = new Text ();
    private String [] fieldIndice = {"logip",
                                    "logtime",
                                    "referer",
                                    "bcookie",
                                    "urlquery"}

    };//need more
    private TreeMap<String, Integer>fieldhash = new TreeMap<String, Integer>();
    private String key1;
    public void configure (JobConf job) {
    for (int i = 0; i<fieldIndice.length; i++){
        fieldhash.put(fieldIndice[i],i);
    }
    key1 = job.get("key1");
    }
    public void map (WritableComparable key, Writable value,
    OutputCollector output,
    Reporter reporter)throws IOException {
        String line = ((GBKText)value).toString();
        String[]fields = line.split("\u0001");
        int queryindex = fieldhash.get(key1);
        int bcookieindex = fieldhash.get("bcookie");
        if(fields.length<= queryindex || fields.length<= bcookieindex)
            return;
        output.collect(new GBKText(fields[queryindex]),new
        GBKText(fields[queryindex]));

    }
}
```

From this implementation of intercepting code, we first define an array of strings: fieldIndice. In this array we define the corresponding field meanings in the log format:"logip","logtime","referer","cookie","urlquery". In addition, the input log files are split with \u0001 and chopped into HASH array one by one.

2) Define the Reducer, optionally, to specify the intermediate result and output the final result.

```
public static class Reduce extends MapReduceBase implements Reducer {
    public void reduce(WritableComparable key,Iterator values,
OutputCollector output,
Reporter reporter)throws IOException{
    int sum = 0;
    HashSet<String>bcookieset = new HashSet<String>();
    While(values.hasNext()){
        sum++;
        bcookieset.add(value.next().toString());
    }
    //String query = key.toString();
    output.collect(key,new
GBKText(String.valueOf(sum)+"\u0001"+ String.valueOf(bcookieset. size())));
    }
}
```

3 THE INFLUENCE OF NETWORK ENVIRONMENT ON ENTERPRISE FINANCIAL ACCOUNTING INFORMATION SYSTEM

3.1 The network has changed the working environment of enterprise financial accounting (Luo, 2013 and Hu, 2015)

Accounting information of enterprises will change with the constant changes of the overall economic environment faced by enterprises, and then more truly and directly reflect the overall economic operation of an enterprise, and help guide enterprises to improve the overall economic structure. For example, culture, education, economy, science and technology should belong to the overall environment of enterprise accounting work. With the rapid and in-depth development of enterprise Internet, it will also have a great impact on the working environment of enterprise accounting. The overall environment of enterprise accounting work can be effectively guided by the enterprise Internet and have profound reform and significant changes. With the application of Internet in enterprise accounting work, enterprise accounting work can adapt to the new process of modern economic development, and then provide more accurate accounting credit analysis service for other social subject enterprise personnel. Figure 1 shows the situation of relevant personnel with accounting professional background in an enterprise.

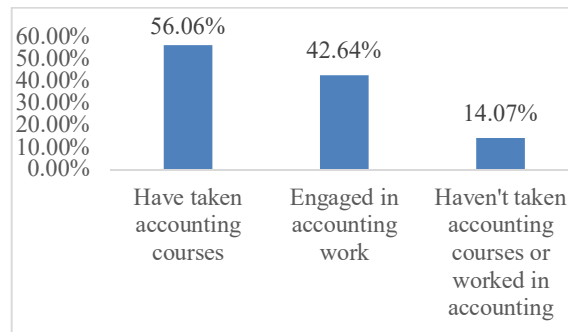


Figure 1 the situation of relevant personnel with accounting professional background in an enterprise.

3.2 The influence of network environment on enterprise accounting information system (Wei, 2007 and Tian, 2015)

With the development of mobile Internet, the processing methods of important data in accounting work have changed. The traditional enterprise manual automatic data processing mode is gradually broken through, began to try to use the computer automatic calculation and processing technology directly for accounting data processing, improve the efficiency of accounting information data processing. In the mobile Internet era, the information output and data input of enterprise accounting processing data can be transformed into two-way, and the operation and operation are very convenient, which can effectively meet the application requirements of today's enterprise network accounting information data processing, and save more cumbersome accounting data processing operation links. In the environment of using the Internet, accounting management workers' pay more attention to the processing and analysis of large data accounting information, to ensure the accuracy and scientific analysis of accounting information, and promote the working concept and quality of senior management accounting of Chinese enterprises. Figure 2 shows that Top 10 IT technologies affecting accounting professionals in 2020, indicating that accounting is inseparable from information technology

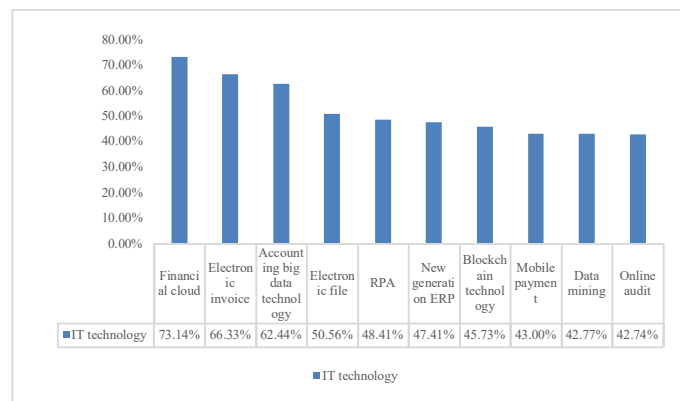


Figure 2 Top 10 IT Technologies affecting accounting professionals in 2020

3.3 Other influences of network environment on enterprise accounting work (Tian, 2015 and Zhang, 2003 and Zhao, 2013)

Accounting information management system has been a big security risk. In modern computing information resources and information network sharing management mode, accounting information management system data in a access to the Internet in the environment of security risks, vulnerable to insecurity and network virus factors directly implant attacks, This will seriously harm the entire enterprise financial department in the accounting information management system to the effective and timely processing of data related information, information in the data system is easy to be a variety of network viruses and ransomware virus directly implanted or infringed. Some enterprises accounting information system management is easy to be directly affected by the security and uncertainty of the whole enterprise network, which makes many trade secrets on e-commerce difficult to deal with effectively. Ultimately affecting the work of enterprise accounting information system, it will cause the economic loss of the whole enterprise, which should be paid attention to by our accounting industry at present.

In recent years, with the rapid improvement of market demand and the rapid development of the express industry, the scale of express business is also developing rapidly. In 2021, the total business volume of express delivery service enterprises in China reached 108.30 billion, up 29.9 percent year on year. From January to October 2022, the total business volume of express delivery service enterprises in China reached 89.87 billion, up 3.6 percent year on year. In 2021, the business revenue of express delivery service enterprises in China reached 1,033.23 billion yuan, up 17.5 percent year on year. In terms of express business revenue, from January to October 2022, the business revenue of express service enterprises in China has reached 859.13 billion yuan, up by 3.0% year-on-year. (See Figure 3).

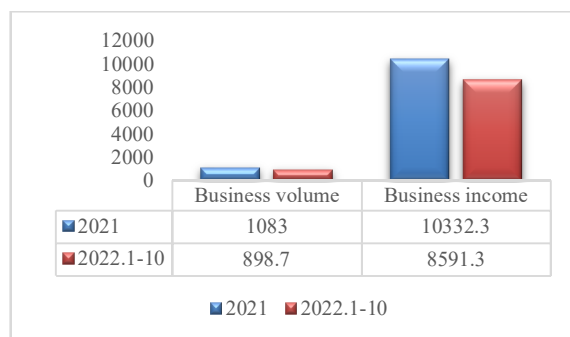


Figure 3 Business volume and business income of express delivery in China in 2021 and 2022 from January to October (unit: hundred million pieces/Yuan).

As shown in Figure 4, it can be seen that the market size statistics of China's cross-border e-commerce logistics industry from 2015 to 2019 are increasing year by year.

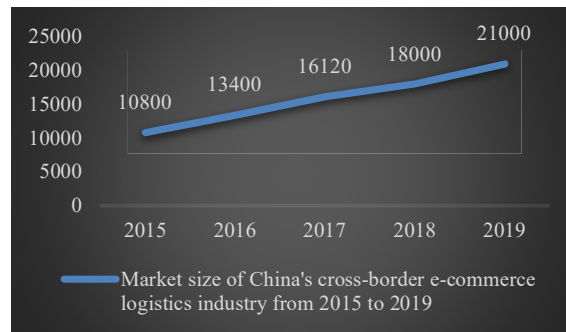


Figure 4 the market size statistics of China's cross-border e-commerce logistics industry from 2015 to 2019 (unit: hundred million yuan).

4 ANALYSES OF PROBLEMS FACED BY ENTERPRISE ACCOUNTING UNDER NETWORK ENVIRONMENT

4.1 Accounting theory is inconsistent with practice (Luo, 2003 and Wei, 2007 and Hu, 2015)

Under the network environment, it is based on the developed information transmission. The virtual enterprise based on network gradually prevails. The production and management of enterprises has the characteristics of virtuality, short term and high flexibility. Under such production and management conditions, the accounting subject presents diversification and high uncertainty. Many parts of traditional accounting theory are no longer applicable. For the effectiveness of accounting information, accounting assumptions come into play.

4.2 Accounting elements to be adjusted (Zhao, 2015 and Tian, 2015)

The classification of accounting elements is an important basis for determining the correct classification of accounting objects, and it is also an important basis for determining the basic structure of accounting statements and how to make scientific formulation and reasonable measurement of accounting contents. Under the environment of network economy, the rapid development of information network technology greatly speeds up the work speed of real-time transmission of accounting information and data collation. In order to make small and medium-size enterprise accounting capital market movement relevant situation timely and accurately reflect, accounting elements should be more comprehensive and detailed. However, the existing accounting elements are not comprehensive enough. For example, in the network environment, the behaviours elements that are difficult to be measured by money are the key concerns of information users.

4.3 The knowledge structure of accounting personnel and the setting of accounting institutions need to be adjusted (Zhao, 2013 and Liu, 2013 and Yu, 2019)

In the network environment, a lot of basic accounting work is done by computers. The focus of accounting personnel is transferred to the reorganization and transformation of business processes. The development direction of CPA will shift to enterprise process control, internal

management, and strategy and risk assessment. Therefore, in the network environment, the knowledge structure of accountants needs to be adjusted. In addition, most of the existing accounting personnel structure is pyramid, middle and low-level managers, low efficiency, lack of flexibility, which is not conducive to the development of enterprise accounting.

4.4 Staffing problems restrict the effective use of the Internet [3,6]

Enterprise accounting management system must be improved. If the system is not perfect, it will affect the healthy development of the company. The number of personnel employed and resource allocation structure is unreasonable, resulting in the accounting management work of many enterprises, the application of information analysis technology is not strict enough, which is easy to lead to significant deviation in the result analysis.

5 THE COUNTERMEASURE ANALYSIS OF ENTERPRISE ACCOUNTING DEVELOPMENT UNDER NETWORK ENVIRONMENT

5.1 Adjusting accounting elements

In today's network economy, the basis of accounting is no longer limited to the enterprise currency. The enterprise capital increment movement of accounting measurement object is actually a kind of value movement. Therefore, many factors that can help increase the value of enterprise value movement can be considered as resource elements in enterprise accounting, such as enterprise intellectual property assets, human resources and enterprise domain name registration resources. In addition to the above several elements of accounting behaviours may need to be adjusted, there may also be a need to add another element of financial behaviours accounting, which is also an element of accounting behaviours that is difficult to be counted with electronic money in the current network economic environment, but is widely concerned by other information technology users.

5.2 Strengthen the education of accounting personnel

The problems of organizational accounting management can be solved by implementing various innovative accounting education through network. Specifically speaking, on the one hand, we can quickly obtain learning resources by using Chinese Internet education websites. On the other hand, internship learning, collaborative problem learning and joint discussion problem learning can be conducted through training. In this direction, we can deeply cultivate professional accounting personnel's consciousness, thinking and business skills in professional innovation and development, and urge them to change the existing network knowledge ability structure so as to adapt to the rapid development of Chinese network economy. Although there are some technical problems in the actual operation of network enterprise accounting, its technical advantages are still obvious compared with the traditional accounting methods. Giving full play to its technical advantages will inevitably improve the accounting efficiency and social economic benefits of small and medium-sized enterprises.

6 CONCLUSIONS

In short, with the continuous upgrading of enterprise information electronic technology and the popularization of network application, information electronic technology service products are constantly updated, the quality-of-service products is constantly improved, the data exchange service network of public enterprises is gradually established and the economy develops rapidly. Network enterprise accounting will certainly get more attention and wide application. Network enterprise accounting will certainly solve many problems existing in the enterprise, so as to maximize its technical advantages, so that accounting management and the world's advanced management mode of integration, management more scientific, standard. Network enterprise accounting will also develop into a new technology field with the greatest development potential in contemporary accounting. Under the network economy environment, the scientific development of accounting management is still faced with new opportunities for development. The convenience and efficiency of the Internet still plays a positive role in gradually improving the level of accounting management of enterprises

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