

The Coping Strategies of Accountants Under the Background of Artificial Intelligence

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Abstract

Artificial intelligence, as the product of today's social development and technological innovation, has become the core driving force of a new round of scientific and technological innovation and industrial transformation, and is having an extremely profound impact on the world economy, social development and people's lives. It has also been widely used in the field of accounting entities--financial robots, which have gained the favor of enterprises with the advantages of huge data processing, efficient business operation and uninterrupted working time, but at the same time, it also leads to the surplus of basic accounting staff. Therefore, it is necessary from the perspective of accountants, to analyze its challenges, explore their own advantages, make full use of the opportunities of career transformation, and seek strategies to become excellent accountants in the new era.

Keywords

Artificial Intelligence; accounting robots; accountants.

1. INTRODUCTION

The report of the 19th National Congress of the Communist Party of China stated that it is necessary to promote the deep integration of the Internet, big data, artificial intelligence and the real economy, to cultivate new growth points and form new momentum. General Secretary Xi Jinping emphasized, artificial intelligence is an important driving force for a new round of scientific and technological revolution and industrial transformation, and accelerating the development of a new generation of artificial intelligence is a strategic issue concerning whether China can seize the opportunities of the new round of scientific and technological revolution and industrial transformation. Artificial Intelligence (AI, for short) is a new technical science that studies and develops theories, methods, techniques and application systems for simulating, extending and extending human intelligence, make computers do things that only people used to be able to do. Artificial intelligence is divided into strong artificial intelligence and weak artificial intelligence. Weak artificial intelligence has no ideology and cannot make decisions independently, while the products of strong artificial intelligence have the ability of independent thinking and can be competent for all human work. At present, the application of weak artificial intelligence has brought great convenience to human work and life, but at the same time, it has also caused some "career dying" panic. For accountants, it is not only faced with challenges such as post adjustment and skill training, but also accompanied by new opportunities.

2. LITERATURE REVIEW

In the connotation of artificial intelligence interpretation, in 1956, Professor Winston of the Massachusetts Institute of Technology at the Dartmouth meeting first proposed that artificial intelligence is to study how to make computers do intelligent work that only humans used to do. Minsky(1961)called this kind of research a new science. Min(2010)compared artificial

intelligence products to "thinking machines" that can imitate, learn and replace human intelligence. Cerka et.(2015)proposed that artificial intelligence is based on traditional computer algorithms and gives meaning to rational thinking and action. Deyi Li and Yi Du(2017)believed that artificial intelligence is a variety of intelligent behaviors realized artificially by human through machines, systems or networks, such as perception, memory, emotion, judgment, reasoning, proof, recognition, understanding, communication, design, thinking, learning, forgetting, creation and so on. Xin Zhang and Minghui Wang(2019) summarized previous views and summarized artificial intelligence as: different from the conventional computer technology that performs calculation or control tasks according to established procedures, it has self-learning, self-organization, self-adaptive Action and other characteristics.

In terms of the impact of artificial intelligence on finance, scholars generally agree that artificial intelligence is a double-edged sword with both challenges and opportunities, but the entry point of analysis is slightly different. From the perspective of human resources in accounting industry, Wei Zhang (2016) proposed that artificial intelligence can improve work efficiency, release human resources and reduce labor costs; Weijun Chen and Chunchun Xu have summarized the risks of applying artificial intelligence as: increased difficulty in supervision, increased system risk, and increased risk of information leakage; In the study of risk control, Nannan Zhao built a more effective financial risk warning model based on the control algorithm of artificial intelligence. There are also many scholars who make suggestions for accountants and put forward strategies to transform into compound, management and intelligent talents, mainly to transform to management accounting (Weiting Chen 2018, Fang Shi 2019, Xueming Fan2020).

3. THE APPLICATION STATUS OF AI IN ACCOUNTING

Table 1. Differences between accounting and finance

	Accounting	Finance
Concept	Accounting is an economic management activity that uses currency as the main unit of measurement and adopts special methods to conduct complete, continuous, systematic accounting and supervision of the economic activities of the unit.	Finance is the business activity reflected in the form of capital movement, that is, the capital movement process such as fund input, occupation, consumption and distribution.
Functions	Accounting and supervision	Forecasting and decision-making
Basis	National unified accounting system	The intention of leaders
Period	Focus on the past	Confront the future
Purpose	Provide reliable information for users	Maximization of enterprise value
Conclusion	Basically fixed	More flexible

In 2016, Deloitte & Touche introduced robots to replace some manual operations in the accounting process, such as invoicing, information entry and data statistics. Subsequently, the other three major international accounting firms also began to use robotic automation programs for tax, manpower, and material management. It is said that they can identify RPA, human-computer interaction, and data analysis. In addition to accounting firm, the central enterprises Sinochem International Corporation has also enabled financial robots. The RPA process automation robot developed by Shanghai Tangdi Company has also been gradually come into use, and some state-owned enterprises have also developed financial robots to assist accounting work. At one time there were voices such as "the era of intelligent finance is coming", "accounting is about to lose their jobs", and "the crisis of the elimination of financial people is

coming", accounting professionals are in a panic and have been affected by the high death rate of accounting jobs, according to statistics on the ranking of jobs that can be replaced by robots. In this regard, it is necessary to distinguish two concepts: one is the difference between accounting and finance, see Table 1, and the other is the difference between artificial intelligence and robotic process automation, see Table 2.

Table 2. Differences between between AI and RPA

	Artificial Intelligence(AI)	Robot Process Automation(RPA)
Concept	Research and development of a new technical science for simulating, extending and expanding human intelligence	Software based on computer coding and rules, a technique that automates manual activities by performing repetitive tasks
Roles	Issue instructions	Execute instruction
Skills	Learn and revise by itself, and can make changes	No changes will be made to the system and procedures set
Application	Application scenarios are wider and broader	Suitable for operational process areas with clear business rules, structured inputs, and outputs

Therefore, there is no need to panic excessively. At present, artificial intelligence is not widely used in the financial field. The so-called "financial robot" is just an application of robot process automation in the financial field [1], which replaces a large number of repetitive and highly regulated jobs in the accounting field by machine process automation technology. Therefore, it is more accurate to say "accounting robot" than "intelligent finance" or "financial robot". However, AI will be the core driver of a new round of industrial revolution [2], China will fully deploy and support the in-depth integration of artificial intelligence and the real economy. As a Chinese saying goes "He lives unsafely that looks too near on things", accountants should have a clear understanding of the situation, seize opportunities and face challenges.

4. CHALLENGES FACED BY ACCOUNTANTS

4.1. Disadvantages of Accountants Themselves

The labor cost of accountants is relatively high. Although the initial purchase cost of accounting robots is high, the subsequent maintenance costs are low. Based on the calculation of an ordinary accountant's annual salary of RMB 120,000, assuming 30 years of work, it is RMB 3.6 million. In addition to employee benefits, vocational training, and paid vacations, it is more cost-effective to use robots in a comprehensive comparison. In exchange for "5 + 2" (5 working days plus 2 days of weekends), "white + black" day and night uninterrupted working hours in return. The work of accounting robot has the advantages of fast, accurate and good. More than 50 enterprises in Changsha use the accounting robot of automatic bookkeeping and tax declaration. It only takes 15 minutes to input the invoices and salary flow of a month, and automatically generate accounting vouchers, accounting books, profit statements, national and local tax returns, the accuracy rate reaches 100%. The accounting robots used by Jiangsu Telecom automatically produce more than 60,000 orders per month, accounting for 70% of the monthly accounting volume. From this perspective, the working efficiency of accounting robots is much higher than that of ordinary accounting personnel.

4.2. Challenges from the External Environment

According to data from the Ministry of Finance, among the more than 20 million accounting certificate holders in China, about 6 million have a certificate or above with a junior accounting title. After canceling the accounting qualification certificate in 2017, accounting practitioners are required to have professional ability, legal awareness, risk awareness and accounting professional ethics, which, on the one hand, raises the threshold of accounting industry access. On the other hand, it attracts more excellent non-accounting talents to join the accounting industry, which has a huge impact on the accounting practitioners.

In addition, in order to accelerate the construction of China's innovative country and the world's scientific and technological power, the State Council, the Ministry of Industry and Information Technology, and the Ministry of Science and Technology have issued action plans to promote the deep integration of artificial intelligence and the real economy. With the strong support of national policies, the function of accounting robots will increasingly perfect, the basic accounting personnel are in a more disadvantaged position.

4.3. Potential Ethical Threat

Accountants are susceptible to interests, resulting in illegal behavior. Accounting professional ethics requires accountants to be objective and fair, honest and self-disciplined in their work, but when dealing with colleagues or friends with good personal relations, there are often situations where requirements are reduced, documents are saved, and procedures are skipped. If there is no separation between public and private interests, and interests are awakened, there will be accounting frauds such as using power for personal gain, embezzlement, false transactions and other accounting fraud problems. Accountants' personal interests are inflated, driven by the superior can not maintain independence, and the use of accounting robot without these concerns and emotions, so there is no need for emotional management. Therefore, there is no fraud of favoritism.

5. THE COPING STRATEGIES OF ACCOUNTANTS

5.1. Improve Ability of Communication

As a person, accountants have subjective initiative. The reason why the current accounting robot has not completely replaced artificial labor and realized full intelligence is that the robot has no ideology and cannot carry out thinking activities, and can only perform operations according to the pre-set procedures. Since consciousness and thinking are based on language, language as the material carrier of thinking is involved in the whole higher cognitive function. For example, the number of manual customer service in the communications industry has been reduced by more than 60%, and the cost has indeed been saved. However, the limited consultation types set by the system cannot meet customer needs, and the service satisfaction is not satisfactory. The crux of the problem is that robots cannot communicate with people in words, while financial work requires communication and communication, such as various special business consulting of reimbursement personnel and explaining the meaning of report data to leaders.

5.2. Transition to Management Accounting

"If accountants do not understand business, they can only provide low-value accounting services." This is one of the classic quotes of Ren Zhengfei. Financial personnel can only make use of professional judgment to provide high-quality comprehensive analysis conclusion if they understand the company's business. With the development and promotion of accounting robots, more and more enterprises are willing to use robots to replace part of the basic accounting work, while squeezing the space for accountants, it also brings new opportunities

and choices for accountants. The <Thirteenth Five-Year Plan for Accounting Reform and Development> issued by the Ministry of Finance and the <National Accounting Leading Talent Cultivation Project Development Plan> clearly point out that it is necessary to vigorously deepen the training of leading accounting talents and professionals in urgent need, and accelerate the promotion of management accounting talent, It puts a huge demand for management decision-making accounting talents. The Shanghai Financial Work Commission stated that management accounting talents with excellent financial and accounting professional qualities and good macro research and analysis capabilities are listed as shortages in Shanghai's financial sector.[3] In addition, accounting professional judgment requires accountants to make decisions and conclude uncertain accounting matters, which is characterized by subjectivity and trade-offs. This is the weakness of accounting robots. Accountants should seize this opportunity, go deep into the business base, accelerate the integration of business and finance, and improve their comprehensive financial management ability.

5.3. Strengthen Accountants' Ethical Education

The corporate culture is intangible, consisting of values, beliefs, ceremonies, etc., a positive image reflected in the daily work of the company. Excellent accountants play an important role in the construction of corporate culture. Financial accounting positions include cashier, bill making, audit, budget, asset management, tax return, financial analysis, etc. They are interlinked and coordinated. In the process of cooperation, not only systems and rules are required, there must be tacit understanding and humane care. The cold accounting robot is not the Bumblebee shown in the movie "Bumblebee", unable to perceive the complex emotional state of human beings. Accountants should strengthen ideological and political education and accounting professional ethics, maintain financial independence, consciously resist the temptation of interests, and be a financial person who is dedicated to work, honest and trustworthy, objective and fair, and clean and self-disciplined. Only accountants use passion, integrity, proficiency, meticulousness, and diligent professional ethics to create an excellent accounting team, play a typical role model, and use excellent accounting culture to produce a "building block" collaborative innovation effect and penetrate into all corporate activities to create continuous value-added for enterprises[4].

6. CONCLUSION

The emergence of accounting robots has weakened the value reflection function of accountants, and the demand for value creation has been strengthened. In addition, the country has vigorously developed the policy environment of artificial intelligence. While enriching knowledge reserves, accountants must improve their ability to deal with complex and changing external economic environments. To strengthen communication with the international community, to be an enterprise's decision supporter and strategy maker.

ACKNOWLEDGEMENTS

This study is supported by the Talent Support Program of Heilongjiang Bayi Agricultural University (No: RRCPY201904).

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