Performance Analysis of Multi-Phase Equity Incentive Tools of Huichuan Technology

Weihuang Wu*

Guangzhou New Channel-Zengcheng Experimental Middle School, Guangzhou, Guangdong, 511300, China

*wuweihuang111@gmail.com

Abstract. As an important tool for promoting long-term development and improving financial performance, equity incentives can effectively alleviate the principal-agent problem, reduce the turnover rate of core employees, and foster corporate innovation. This study takes Huichuan Technology, a high-tech enterprise, as the research subject and conducts a systematic analysis of its seven-phase equity incentive plans implemented between 2014 and 2025. The research findings are as follows: First, the main motivations for Huichuan Technology to implement equity incentives include alleviating R&D talent loss pressure(the turnover rate of core technical personnel decreased by 15 percentage points), addressing the challenge of rapid technological iteration in the industry, and meeting the strategic needs of manufacturing transformation and upgrading. Secondly, from the perspective of financial performance, equity incentives can enhance enterprise value, which is reflected by the increase in the Compound annual growth rate of operating revenue, the growth of the ratio of R&D investment, and the return on equity remains at the leading level of the industry. However, the study also found some problems, such as the plan of equity incentive has insufficient adaptability to the cyclical fluctuations of the industry and the suboptimal Efficiency in Equity Instrument Combinations. This study not only enriches empirical research on equity incentives in high-tech enterprises but also provides a critical reference for manufacturing firms seeking to balance short-term performance and long-term technological advancement through innovative incentive mechanisms during digital transformation.

Keywords: Equity Incentive, Huichuan Technology, Financial Performance.

1 Introduction

In recent years, China's high-end manufacturing industry has entered a critical stage of transformation and upgrading, with competition shifting from traditional cost advantages to technology and talent-driven models. As an important part of the high-end manufacturing industry, industrial automation has become a key direction of national strategic emerging industry development. In this context, the core competitiveness of technology incentive enterprises is not only reflected by the

X. Pan et al. (eds.), *Proceedings of the 2026 11th International Conference on Financial Innovation and Economic Development (ICFIED 2026)*, Advances in Economics, Business and Management Research 382,
https://doi.org/10.2991/978-94-6239-642-5_6

technology research and development level, but also depends on whether it can stabilize and motivate the core technical staff and management team. Huichuan Technology, a leading Chinese automation enterprise, has achieved coordinated development across multiple business sectors. The company started with a frequency converter, and gradually expanded its business to general automation, smart elevators, new energy vehicles, rail transit, and other fields. Centered on the three core technologies of electrical and electronic hardware technology, motor drive technology, and industrial control technology, it has risen as a leading enterprise in the field of industrial control in China. In recent years, the company has continued to implement the equity incentive system. As of 2024, the company has launched seven equity incentive schemes, covering multi-level core personnel, aiming to enhance team cohesion and strategic execution through long-term interest binding. However, Equity incentives do not achieve the desired effect in all enterprises. Its motivation and effect are influenced by industry environment, incentive mechanism design, and corporate strategy. Therefore, researching the motivation and effect of Huichuan technology's implementation of equity incentives plays a vital role in understanding the practical logic and optimization path of manufacturing equity incentives.

According to the principal-agent theory, the implementation of equity incentives by Huichuan Technology not only reduces agency costs between management and shareholders through interest alignment but also strengthens talent development. The equity incentive system has gradually become a routine. The equity incentive system has gradually become a regular arrangement for listed companies to solve the problem of agency [1]. According to the risk-taking theory, when Huichuan Technology implements restricted stock incentives, executives will align their personal interests with corporate long-term interests, thereby being more willing to take reasonable risks in investment decisions to drive innovation and performance growth. This behavior, in turn, stimulates the risk-taking spirit of executives and has a positive impact on the financial performance of enterprises, especially in companies with more concentrated executive power [2]. According to the theory of human capital, the creation of enterprise value in the high-tech industry is dependent on the human capital of the excellent management team of core technical talents.

Existing literature points out that the core motivation for manufacturing enterprises to implement equity incentives includes improving corporate innovation output and promoting internal innovation collaboration through such incentives, thereby gaining a competitive advantage in related fields [3]. Through the implementation of equity incentives, strengthen the supervision and incentives of the middle and high-level to prevent tunneling and the outflow of excellent talents [4]. The effect of equity incentives includes that equity incentives, as a long-term incentive mechanism, can effectively stimulate the innovation motivation and work enthusiasm of employees, so as to promote enterprises to continuously optimize products and services and enhance market competitiveness. At the same time, the mechanism can promote the management to pay more attention to the long-term development strategy and sustainable operation of the enterprise, so as to improve the overall financial performance and shareholder value of the enterprise [5]. Modern enterprises solve the problem of separation of ownership and control through equity incentives [6].

This paper takes Huichuan Technology as the research object, based on its seven-phase equity incentive plan implemented from 2015 to 2024, and uses the method of case study to systematically investigate the implementation motivation and economic consequences of equity incentives in China's high-end equipment manufacturing enterprises. The incentive effect is reflected in the average annual increase of 2.3% in R&D investment intensity, and the number of patent authorizations ranking first in the industry for five consecutive years. This study expands the applicability of principal-agent theory in technology-intensive enterprises from a dynamic perspective, reveals the role of differentiated design of equity incentive schemes in promoting the implementation of strategies, and provides an empirical reference for the optimization of human capital incentive mode in the transformation and upgrading of the manufacturing industry.

2 Introduction of the Huichuan Technology Case

2.1 Company Profile

Founded in 2003 and listed on the ChiNext Market of the Shenzhen Stock Exchange in 2010, Huichuan Technology is a leading enterprise in China's industrial automation control and new energy vehicle electronic control fields. The main business of the company covers industrial automation, smart elevators, new energy vehicle electronic control systems (motor controller, powertrain, etc.), and rail transit traction systems. With the advantages of core technology in the fields of motor drive, power electronics, and industrial control, Huichuan technology has provided key components and solutions for leading enterprises such as Ningde Times, Sany Heavy Industry, and BYD, forming an industrial layout with multiple industries and scenarios

In the domestic industrial automation market, Huichuan Technology occupies an important position. In 2024, the market share of the servo system will reach 18%, ranking at the forefront of the industry. In the field of new energy vehicles, the company's electronic control system is supported by a number of mainstream vehicle companies, benefiting from the rapid growth of the industry. In 2024, the company's revenue reached 37.041 billion yuan, and its R&D personnel accounted for 23%, highlighting its technology-intensive characteristics. Due to the rapid technology iteration and long R&D cycle of the industrial automation and new energy vehicle industry, Huichuan Technology has a high demand for long-term capital investment and stability of core talents. Therefore, since listing, the company has continued to promote the equity incentive plan to enhance talent stickiness and support the strategy of technological innovation and market expansion.

2.2 Equity Incentive Process

Huichuan Technology initially adopted a single restricted stock model. When it was first implemented in 2015, 4.59 million shares were granted, covering 174 employees. The assessment indicators focus on a single financial indicator. It is required that the net profit growth rate in 2016-2019 should reach 10%, 20%, 35% and 45% respec-

tively, based on 2014. The unlocking arrangement adopts the traditional four-year equal installment mode, with 25% unlocking each year. In 2016, the scale of the second phase plan was significantly expanded to 53.6414 million shares, the number of incentive objects increased to 635, and the assessment criteria and unlocking arrangement of the first phase were extended. In 2019, the company introduced stock options, granting 17.757 million share options and covering 468 employees. The unlocking arrangement was adjusted to a three-phase model. In 2020, the innovation adopted two types of restricted stock portfolio, with 326.656 million shares granted for the first time and 621 incentive objects, reaching a historical peak. At this stage, we began to pay attention to innovation indicators such as the proportion of R&D investment, but the unlocking arrangement returned to the traditional four-year equal staging mode. The company has gradually formed a mature hybrid toolkit model, and granted 23.21 million rights and interests in 2022, covering 864 people.

As shown in Table 1, in order to further establish and improve the company's long-term incentive mechanism, the company has carried out a total of seven equity incentive plans. Huichuan Technology launched the seventh phase of the equity incentive plan in August 2024, using a combination of the first type of restricted shares, the second type of restricted shares, and stock options. The total granted equity was 34.6552 million shares, and the grant price was 42.46 yuan/share. The plan is for directors, senior executives, and core technical personnel of the company. It is required to set three assessment periods from 2025 to 2027. Based on 2023, the growth rate of operating revenue in each period shall not be less than 40%, 60%, 85% and the growth rate of net profit shall not be less than 25%, 40%, 55% respectively. According to the calculation, the total cost of the reserved grant part is 76.0489 million yuan, which will be amortized in stages from 2025 to 2028. The incentive plan aims to attract and retain core talents and promote the continuous growth of the company's performance by establishing a long-term incentive mechanism.

Table 1. Huichuan technology's 2014-2025 equity incentive plan.

Time	Type	Quantity Granted	Participants	Performance Metrics	Vesting/Exercise Schedule
2015	Restricted stock	4.59million shares	174	Based on 2014: net profit in 2016 is≥ 10%,2017 is≥20%,2018 is≥35% and 2019 is≥45%	4 installments,25% annually
2016	Restricted stock	53.6414million shares	635	Continue the second phase of the standard	4 installments, 25% annually
2019	Stock options	1,775.7million copies	468	3installments:30%/30%/40% after 12 months	3installments:30%/30%/40% after 12 months
2020	Two types of restricted stocks	326,656,000 shares(first)	621	Divided into four installments, 25% per year	4 installments,25% annually
2022	Hybrid Package	23,213,100 shares	864	3 installments: 40% initial 30% annually	3 installments: 40% initial 30% annually
2024	Hybrid Package	34,655,200 shares	1160	3 installments: 40% initial 30% annually	3 installments: 40% initial 30% annually
2025	Reserved Portion	3,458,000	141	Based on 2023: revenue≥40% or net profit≥25% in 2025, ≥60% or≥ 40% in 2026, and≥85% or≥55% in 2027	Same as the main plan

Data source: 2015-2025 annual report of Huichuan Technology and the listed company announcement.

3 Motivation Analysis of Huichuan Technology Equity Incentive

From the perspective of enterprise strategy, Huichuan technology equity incentive has three main motivations. First, according to the human capital theory, high-end talents are the key to creating greater corporate value. The high-tech industries involved in Huichuan Technology face fierce talent competition and high demand for high-end talent, so the company can attract and retain such talent through equity incentives. In 2015, equity incentive was implemented for the first time. By granting equity, the interests of core talents were tied to the company's long-term development, reducing short-term job-hopping motivation, and the turnover rate of R&D personnel was reduced to less than 5%, indicating that equity incentive measures have played an incentive role in stabilizing the core team. In 2024, Huichuan Technology further optimized its equity incentive plan. Its seventh phase of the equity incentive plan covered 1146 incentive objects, 80% of which were R&D backbones, including 14 foreign technical experts and a large number of local core technical personnel. This strategy has effectively reduced the risk of brain drain and supported the company's continuous innovation. In 2024, the number of R&D personnel increased to 5538, accounting for 23% of the total number of employees.

As a typical representative of technology-intensive enterprises, Huichuan Technology is facing the pressure of technology iteration in the transformation of the industrial automation industry to intelligent and Internet. Driven by equity incentives, the company's R&D investment increased from 420 million yuan in 2015 to 3.147 billion yuan in 2024, with a compound annual growth rate of 25% (Huichuan technical annual report, 2024). This continuous increase in R&D investment not only reflects the urgent need for technology upgrading in the industry but also highlights the strategic intention of enterprises to maintain a competitive advantage through technological innovation. In order to effectively encourage R&D teams to break through key core technologies, Huichuan technology innovatively incorporated R&D performance indicators into the equity incentive assessment system. The equity incentive plan implemented in 2021 clearly puts forward the assessment requirement of R&D investment accounting for≥ 10%, which significantly promotes the optimal allocation of enterprise R&D resources. Empirical data show that after the implementation of equity incentives, the company's R&D investment intensity has been maintained at a high level of 8%-10% for a long time, which is far higher than the industry average. What is more noteworthy is that by 2024, the company had obtained 2886 authorized patents, an increase of nearly five times compared with 2015, before the implementation of the incentive plan, in which invention patents accounted for more than 30%. This management mode, which deeply binds equity incentives and R&D objectives, not only effectively reduces the turnover rate of core technical personnel but also constructs a long-term mechanism for continuous innovation. Scientific equity incentive design can significantly improve the innovation efficiency of technology-intensive enterprises, which has important reference significance for China's high-end manufacturing industry at the critical stage of transformation and upgrading [7].

In addition, the principal-agent problem is also Huichuan technology. Due to short-term considerations of personal career development and performance evaluation, senior executives and core employees tend to avoid the uncertainty of innovation activities, leading to a contradiction between conservative operations (to avoid sunk costs of innovation investment) and the lag in achievement transformation [8]. Huichuan technology introduces the equity incentive mechanism to reshape the innovation dynamic system through the following paths: benefit synergy effect: bind employee compensation to the long-term value of the enterprise, change the risk sharing mechanism of decision-making time horizon; let core talents share the excess benefits brought by the success of innovation, compensate for the risks they bear, and encourage independent innovation: endow innovation subjects with greater decision-making autonomy and resource allocation rights through equity grant During the period of the third equity incentive from 2016 to 2020, the proportion of the company's management expenses in operating revenue fell from 15% to about 12%, indicating that the interests of the management and shareholders are more consistent and unnecessary expenses are reduced.

4 Analysis of Implementation Effect

4.1 Financial Performance

Since the implementation of the first phase of equity incentives in 2015, Huichuan Technology's operating revenue has shown an accelerated growth trend. According to annual report data, from 2015 to 2023, its operating revenue increased from 1.997 billion yuan to 23.008 billion yuan, with a compound annual growth rate of approximately 25%. Among them, the year-on-year growth rates in 2016 and 2020 were 32.1% and 55.8%, respectively, significantly higher than the industry average. As shown in Fig. 1, the revenue growth rate in the year of implementation of the incentive plan is generally higher than that of the previous year, indicating that the technology accumulation and market expansion effect brought by the retention of core talents is significant. The research points out that restricted stock incentive directly improves the financial performance of enterprises through performance appraisal [5].

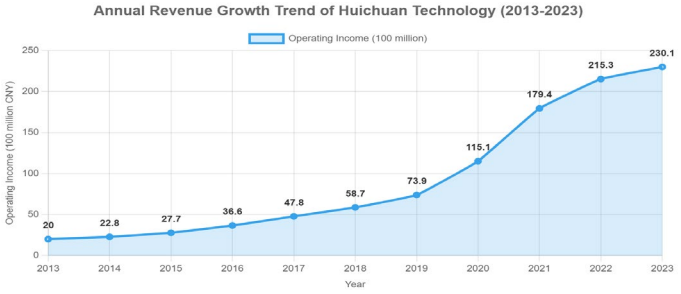

Fig. 1. Annual operating revenue growth trend of Inovance Technology.

In terms of the efficiency of R&D achievements transformation, equity incentives significantly improve the R&D input-output ratio. From 2013 to 2023, the number of R&D personnel of the company increased from 680 to 4200, and the annual number of patent applications in the same period jumped from 156 to more than 1200 (in 2023). The average output of patents of single R&D personnel increased from 0.23 to 0.29 per person. It is worth noting that the proportion of high-value invention patents increased from 40% to 60% after R&D achievements were included in the unlocking conditions in the third phase of the 2019 incentive plan, which confirmed the role of equity incentives in promoting the quality of innovation [9].

In terms of gross margin and technology premium ability, the gross margin of core products has always been maintained at a high level. Taking the general automation business as an example, its gross profit margin increased from 48.3% in 2013 to 52.1% in 2023, and was higher than the industry average. This phenomenon is directly related to the equity incentive covering more than 80% of the R&D team - the increase in gross profit margin achieved through technology premium, which reflects the strengthening effect of the incentive plan on product competitiveness. The comparison found that the gross profit margin of competitors without incentives fluctuated more in the same period.

4.2 Non-Financial Performance

First, market reaction. From the perspective of short-term market reaction, the results of the event study method show that the four equity incentive announcements produce significant abnormal returns on average. Based on the flush data, the cumulative abnormal returns of the first phase (July 16, 2013), the third phase (April 23, 2019) and the fourth phase (December 8, 2020) in the three days after the announcement reached 5.2%, 3.8% and 4.1%, respectively, much higher than the increase of the CSI 300 index in the same period. In particular, the trading volume on the announcement day of the 2020 incentive plan reached three times the average daily trading volume in the previous 30 days, indicating that investors regard Huichuan Technology's equity incentive plan as a positive signal of its long-term development. From the perspective of long-term market value growth, the total market value of Huichuan technology increased from 54.2 billion yuan at the end of 2019 to 128billion yuan in June 2024 (after the restoration of rights), an increase of 136%, and the gem index increased only 42% in the same period. The proportion of institutional shares rose from 35% in 2019 to 58% in 2024, reflecting the recognition of the capital market for governance improvement. It is worth noting that in 2021, the market value of the company retreated (-22%) less than that of competitive products (-30% to-40%), reflecting the anti-risk ability brought about by the incentive plan.

Secondly, talent and strategy landing effect. First, the stability of employees has been significantly improved. The average service life of R&D personnel has been extended from 2.8 years in 2013 to 5.1 years in 2023. The turnover rate of core technical teams (above director level) has been less than 3% for five consecutive years (the industry average is 8% -10%). The fifth incentive implemented in 2022 covered the backbone of overseas subsidiaries for the first time, and the international

business revenue increased by 67% the next year, confirming the supporting role of talent binding on strategic expansion. Second, the innovation commercialization cycle is shortened. The R&D cycle of the servo system team covered by the incentive plan was reduced from an average of 24 months (2015) to 18 months (2023), and the proportion of new product revenue increased from 30% to 45%. The rate of patent industrialization increased from 52% in 2016 to 68% in 2023, reflecting the promoting effect of equity incentives on R&D and market synergy. Third, strategic transformation has accelerated. By comparing the structure of incentive objects in 2016 and 2023, it is found that the proportion of jobs related to new energy vehicles has increased from 15% to 40%, and the proportion of business revenue has increased from 8% to 32% in the same period. This dynamic adjustment mechanism has effectively supported the company's transformation from industrial automation to new energy and verified the design principle of "incentive object and strategy matching".

5 Problems and Suggestions

5.1 Existing Problems

The assessment indicators focus on financial scale and tend to be single. Although Huichuan Technology's current equity incentive schemes have introduced some non-financial indicators, the core assessment still relies on financial indicators such as net profit growth rate (≥15%) and return on equity (ROE, ≥10%) [10]. This design has obvious limitations in the high-tech industry: on the one hand, the financial indicators are vulnerable to macroeconomic fluctuations (for example, the decline of the manufacturing industry in 2022 led to the failure of some batches to meet the exercise conditions); On the other hand, overemphasizing short-term profits may inhibit long-term R&D investment. For example, in 2021, the incentive object reduced the budget for updating experimental equipment by 5% to achieve the profit target.

It is difficult to meet the exercise conditions. As of 2023, the company has implemented five incentive plans in total, with 210million shares granted (accounting for 8.3% of the total share capital), resulting in the cumulative dilution of earnings per share (EPS) of about 0.8 yuan, and the share-based payment fees' proportion in net profit rose from 3% in 2013 to 12% in 2023. In particular, due to changes in the market environment, 35% of the rights and interests of the fourth incentive plan in 2020 were cancelled, failing to recover the early accrual fees. At the same time, the current plan lacks a dynamic adjustment mechanism for cyclical risks. After the decline of new energy vehicle subsidies in 2022, 75% of the incentive objects in relevant business units failed to meet the exercise conditions.

5.2 Optimization Suggestions

In terms of enriching assessment indicators. When Huichuan Technology constructs the equity incentive evaluation system, it can adopt the dual track evaluation mechanism of financial and non-financial indicators to realize the collaborative integration

of quantitative standards and qualitative evaluation [11]. Specifically, in the quantitative dimension, in addition to conventional financial indicators, an innovative energy efficiency coefficient can be introduced; In terms of the qualitative dimension, it is suggested to embed technology reserve indicators, such as the achievement conversion rate, with the proportion of invention patents ≥ 60%. After Huichuan Technology's 2021 incentive plan included the "high-value patent conversion cycle" in the assessment, the marketization process of its servo motor technology was reduced by 40%. This two-dimensional assessment framework balances short-term profits and long-term technology accumulation, which is more in line with the value creation logic of high-tech enterprises.

In terms of the design of exercise conditions. The exercise condition is the core variable of equity payment accounting treatment, and its design, change, and measurement directly affect the financial compliance and incentive effect. Enterprises need to balance incentive objectives and accounting accuracy through institutional norms, professional valuation, and dynamic monitoring [12]. Specifically, the company can introduce a dynamic adjustment mechanism to set flexible exercise conditions in response to market fluctuations. For instance, during industry downturns, it can moderately relax assessment criteria (e.g., lowering the revenue growth rate threshold by 5-10 percentage points) while extending the waiting period to maintain the binding force of the incentive plan. With reference to the measures for the administration of equity incentives of listed companies, the exercise conditions shall be revised through the procedures of the general meeting of shareholders in case of major changes in the external environment.

6 Conclusion

This paper takes Huichuan Technology as the research object, based on its seven-phase equity incentive plan implemented from 2015 to 2024, and uses the method of case study to systematically investigate the implementation motivation and economic consequences of equity incentives in China's high-end equipment manufacturing enterprises. Huichuan Technology's implementation of equity incentives is mainly based on three considerations: alleviating the pressure of brain drain of core technology, coping with the challenge of rapid technology iteration in the field of industrial automation, and solving the principal-agent problem through benefit synergy. After the implementation of equity incentives, Huichuan Technology's operating income increased significantly, and its total market value continued to increase. The theoretical contributions of this study are mainly reflected in four aspects: first, it constructs an analysis framework of "strategic orientation - incentive tool design - performance output" for equity incentives in manufacturing enterprises, thereby enriching the application of strategic management theory in the field of corporate incentives; Secondly, it demonstrates the applicable boundary of human capital theory in technology intensive enterprises through cases; Thirdly, it expands the explanation dimension of principal-agent theory to the combination effect of compound incentive tools; Fourth,

it provides a specific reference scheme for listed companies to design a combination of differentiated incentive tools.

This study has limitations: first, due to limited data availability, it could not quantify the substitution effect between different incentive tools; second, the international comparison dimension is insufficient, as there is a lack of systematic comparisons with multinational manufacturing enterprises. Based on the existing research deficiencies, the following directions can be explored in the future: first, construct the utility function model of incentive tool combination, and quantitatively analyze the optimal ratio of various tools; Second, develop industry cycle sensitive dynamic assessment algorithms to enhance the adaptability of incentive schemes; Third, carry out a cross-cultural comparative study of the manufacturing incentive models in China, the United States, Germany and Japan.

References

1. Zhang, W.: Equity Incentive Motivation and Performance Analysis of Jiuzhou Pharmaceutical. Modern Marketing 1(15), 115–117 (2025).
2. Ma, J., Wang, H.: Research on the Impact of Equity Incentive Model on Enterprise Performance: A Mediating Effect Analysis Based on Executive Entrepreneurship. PLoS ONE 19(4), e0300873 (2024).
3. Zhang, Y.: The Impact of Equity Incentives on Corporate Digital Innovation from the Perspective of Dynamic Capabilities: A Case Study of Guangfeng Technology. Chinese and Foreign Corporate Cultures 1(06), 45–48 (2025).
4. Huang, X.: Research on the Implementation Effect of Equity Incentive in Listed Companies. Modern Business Research 1(01), 20–22 (2024).
5. Xu, D., Zhang, Z.: Research on Evaluation of Equity Incentive Implementation Effect of Lexin Technology. Modern Marketing 1(09), 118–120 (2025).
6. Cheng, Q., Warfield, T.: Equity Incentives and Earnings Management. The Accounting Review 80(2), 441–476 (2005).
7. Peng, C.: Analysis on the Implementation Effect of iFLYTEK Equity Incentive. Cooperative Economy and Technology 1(23), 104–106 (2024).
8. Xu, Y., Zeng, Y.: Research on the Impact of Jingsheng Electromechanical Equity Incentive Plan on Innovation Performance. Modern Marketing 1(06), 119–121 (2025).
9. Hao, W.: Does the Implementation of Equity Incentive Plan Have Effect on Corporate Earnings Forecast and Market Reaction? —Empirical Evidence from China's Security Market. Review of Investment Studies 37(02), 87-101 (2018).
10. Zhang, J.: Application and Impact of Equity Incentive Mechanism in High-Tech Enterprises. Market Weekly 38(02), 38–41 (2025).
11. Xu, J.: Analysis on the Current Situation and Problems of Equity Incentive in Listed Companies. Modern Marketing 1(12), 154–156 (2024).
12. Huang, Y.: Common Problems and Countermeasures of Accounting Treatment of Share-Based Payment in IPO Enterprises. Accountant 1(12), 117–119 (2024).