Huawei's Employee Stock Ownership Plan and its Effect on Productivity: A Comparative Analysis of the 2010–2014 Financial Data of Huawei and ZTE

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1) Introduction

Huawei Technologies and ZTE are two giants among Chinese telecommunications equipment manufacturers and are direct competitors against each other. Professor John Hoffmire and his team at the University of Oxford compared the financial data of these two companies from 2006–2010 in their paper entitled "Employee Stock Ownership Plans and Their Effect on Productivity" (Zhu, Hoffmire, et al., 2013). They found that the adoption of an Employee Stock Ownership Plan (ESOP) has probably provided Huawei a competitive advantage in productivity over ZTE during those years. The question to ask is whether the same conclusion is true five years later, especially since both companies went through strategic changes in 2011. Did the ESOP continue to make Huawei stronger than ZTE during the period 2010–2014?

In this paper, we first examine whether Huawei has an advantage over its competitor (i.e., ZTE) following the strategic restructurings in 2011, and then retest the hypothesis on the positive effect of an ESOP on Huawei's competitive position five years after the study of Professor Hoffmire and his team.

2) Huawei's Employee Stock Ownership Plan

An ESOP is an employee–owner program that allows employees of a firm to become owners through purchase of the company's stock. At Huawei, the ESOP program was introduced in 1990 through Huawei's employee union, which is also the internal organization that managed the ESOP program for the company (Huang, 2002). As a result, employees are allowed to take part in decision-making across the enterprise and enjoy rewards in the form of fixed dividends based on the number of shares they own.

The purpose of adopting an ESOP is not only to set up a welfare system where employees can directly benefit from the success of a company, but also to provide an incentive system that binds the interests of individuals with the interests of the firm. To that extent, an ESOP is one of the most effective golden handcuffs. Moreover, an ESOP program, in certain situations, is flexible enough to reward more shares to those who deliver more and perform better.

The shareholding reform in 2001 introduced virtual stock options, which means that employees do not have to directly own shares to become beneficiaries. During the same time, the returns on employee stock options could be linked to the changes in net assets of the company. This reform also allowed employees to possess stock options in proportion to the level of their performance and contribution to the company. As such, fewer stock options were issued to low performers. The entire process of change in both China and the firm helped Huawei improve employee performance through employee ownership.

As a privately owned technology firm, Huawei was already the world's second largest telecommunications equipment manufacturer in 2010, and eventually became the world's largest in 2014.

3) Different Ownership Structures: Huawei vs. ZTE

Huawei's 2012 Annual Report indicates that the company had 150,000 employees, of which 65,596 were owners holding approximately 98.58% of the company (Zhang, 2013), whereas the company founder Ren Zhengfei owned 1.42%. Through the implementation of the plan, more than 35% of shares were granted to high-performing employees at the top parts of the organization, more than 40% to the larger community of medium level employees and 10–20% to lower level employees. The Huawei model of ownership links the common interests of the company with those of a large minority of employees. It helps increase employee loyalty and commitment and retains high-level talent, and is perhaps part of the reason behind Huawei's sustainable growth.

Compared with Huawei's form of private ownership, ZTE has a joint ownership between the state, public and private owners. Table 1 shows that the top three shareholders of ZTE own 50% of the company shares; a model that allows a minority to own the lion's share of the company. Unlike Huawei, where the ESOP binds the large minority of employees with the common goal of the company through employee ownership, the success of ZTE mostly benefits a small group of senior management, especially the founding members of the company. In addition, many of ZTE's subsidiaries are joint ventures, with majority shareholders being ZTE executives, leading to benefit distribution based on connected transactions. Such complexity may result in conflict in interests between the senior management， ordinary employees and the shareholders of the listed company. Compared with Huawei (where the company is the most important), at ZTE, the interests of smaller groups can sometimes be more important than those of the larger groups of shareholders.

Table 1. Stock Ownership of the Top Three Shareholders of ZTE in 2014 (from ZTE Annual Report 2014).

Shareholders	**Ownership Type**	**Percentage**	**Number of Shares**	**+/− Number of Shares**
1. ZTE Holdings	State owned	30.78%	1,058,191,944	0
2.HKSCC	Foreign owned	18.28%	628,334,340	+26,768
3.Hunan Nantian	State owned	1.09%	37,450,609	0

The different shareholding structures of the two companies have led to different benefit allocation patterns and company cultures. With the dividend-based profit-sharing model of Huawei, employees believe in hard work because when individuals work hard and deliver more, they can have more profit sharing and enjoy greater returns on stock options; this approach was and still is the way to get handsome income. By way of contrast, profit sharing at ZTE is done among a small group of senior and founding members who are connected in a complex manner, whereas the majority of employees have little to do with the company's profit sharing. Therefore, the work pace is slower and more relaxed, and employee income is lower at ZTE than Huawei.

In the original article, Professor Hoffmire and his team indicated that the implementation of the ESOP probably played a very positive role in developing the competitive advantage of Huawei over ZTE during 2006–2010. At this point, however, one may wonder whether the widespread employee ownership continued to bring Huawei a competitive advantage over its most direct competitor during the following period, 2010–2014.

4) Strategic Changes and their Effects on Productivity

In face of the economic downturn following the global financial crisis, both Huawei and ZTE saw their profit fall, but they adopted different types of strategic changes in 2011, which led to two different paths of performance in the three years that followed.

The strategic shift at Huawei included changes in the business structure and the way the ESOP was implemented. Regarding company ownership, Huawei's financial union, which helped employees secure bank loans for the purchase of stock options, was restricted due to the changes in government regulations. Instead, employees were asked to purchase stock options through partial self-funding, of which about 1/3 was deducted from the annual bonus and the rest acquired through bank loans (Wang & Wang, 2012).

Meanwhile, a set of new strategic initiatives was launched at the 2011 shareholders' meeting, including a major business restructuring, i.e., the formation of four business groups (Huawei Carrier Network, Huawei Enterprise, Huawei Consumer, and Huawei Others). In the same year, the company saw an expansion in the number of employees of about 30,000, an increase in investment in R&D of 10%, and the acquisition of Symantec, which was a push to further develop their information technology capabilities.

Shi Lirong became the new CEO of ZTE at the end of 2010. Facing the downturn, he adopted a set of drastic and aggressive new measures. Given that ZTE was owned by a small group of shareholders, the CEO held enough shares and influence to have a direct personal impact on the entire company's direction. As a Chinese saying goes, a company policy made in the morning could be changed by the evening. Such things were not allowed to exist at Huawei. However, Shi went against the conservative strategy set by the former CEO, described as "cash flow first, profit second, and scale third". Instead, he emphasized the pursuit of "scale effect". Hence, ZTE aggressively pursued new projects with low gross profits that eventually lead to even lower net profits. Examples of this approach involved low margin projects in Africa.

Moreover, in the smartphone market, the company focused on low-end products with high risks and low margins. All these changes led to the decline of the company's revenue during the crisis, resulting in negative operating profits in 2012. To counterbalance the decline, ZTE decided to cut costs on a massive scale. As a result, the company lost some high-level talent, as well. Such changes were not pursued by Huawei.

Table 2：Huawei 2010–2014 Financial Data (Unit: million RMB).

Year	Total assets	Sales	Operating profit	Operating margin	Net profit
2010	178,984	182,548	31,806	17.4%	25,630
2011	193,849	203,929	18,796	9.2%	11,665
2012	223,348	220,198	20,658	9.4%	15,624
2013	244,091	239,025	29,128	12.2%	21,003
2014	309,773	288,197	34,205	11.9%	27,866

The financial data in Table 2 show the overall growth of Huawei from 2010 to 2014. The total assets grew from RMB 179 billion to RMB 310 billion, which is an increase of 73%. Sales grew from RMB 183 billion to RMB 288 billion. At the same time, the expansion of Huawei was based on increasing the number of employees, M&A, and investment in R&D; the operating profit decreased from RMB 32 billion in 2010 to RMB 19 billion in 2011, with net profit falling from RMB 26 billion to RMB 12 billion, and operating margins falling from 17.4% to 9.2%. However, starting from 2012 and through 2014, Huawei gained in operating profit, which increased to RMB 34 billion in 2014, with a net profit of RMB 28 billion and an operating margin of 11.9%. Thus, the company had benefited from the strategic restructuring and was back on track for a more stable growth.

Table 3：ZTE 2010–2014 Financial Data (unit: million RMB).

Year	Total assets	Sales	Operating profit	Operating margin	Net profit
2010	84,152	69,907	4360	6.2%	3250
2011	105,368	86,255	2635	3.1%	2060
2012	107,446	84,119	(1983)	(2.4%)	(2841)
2013	100,080	75,234	1828	2.4%	1358
2014	106,214	81,471	3538	4.3%	2634

Table 3 lists the financial data of ZTE during 2010–2014. The growth of total assets saw an increase from RMB 84 billion in 2010 to RMB 106 billion in 2011, with a growth rate of 26%. In 2011, sales experienced fast growth from RMB 70 billion to RMB 86 billion. However, profits went downhill, with operating profit declining from RMB 4.3 billion to RMB 2.6 billion, and net profit going down from RMB 3.2 billion to RMB 2.1 billion. Operating margin decreased from 6.2% to 3.1%. Moreover, ZTE's performance continued to decline in 2012. While sales were at a similar level to 2011, the operating profit declined from RMB 2.6 billion to RMB −2.0 billion, with net profit declining from RMB 2.1 billion to RMB −2.8 billion, and operating margin declining from 3.1% to −2.4%. In 2013, ZTE's sales turnover decreased further, but the profits and operating margin recovered. In 2014, the operating profit reached RMB 3.5 billion, with a net profit of RMB 2.6 billion and an operating margin of 4.3%.

Tables 2 and 3 indicate that both Huawei and ZTE experienced reductions in operating profit, net profit, and operating margin in 2012. But the causes for the reductions were different. Between 2011 and 2012, Huawei spent much of its profit on research and development, expanding headcounts, opening new business opportunities, and acquisitions. The considerable reduction in profit was reversed in the years that followed, and the company was back on track for stable growth. In 2013–2014, the company showed fast growth again, as an immediate result of effective implementation of the new strategy.

ZTE, on the other hand, had a rapid growth in sales in 2011, as a result of the strategic shift. Sales grew but operating profit, net profit, and operating margin went the opposite direction. This situation deteriorated further in 2012, when sales showed no growth because of the decision of ZTE to take on low margin projects from high-risk customers instead of investing in high-level technology. Although the decision increased sales in a relatively short period of time later, the increase was at the cost of margin, which is a sign of a poor strategic move, especially when little was done to invest in greater R&D spending.

Huawei and ZTE adopted different human resources stances and strategic thrusts, with Huawei maintaining the modified ESOP model while going ahead with the brave strategic restructuring. This set of choices allowed the company to protect the reward allocation model, effectively aligning employees with the new vision of the company during the period of change. This choice is partly credited with causing Huawei's increase in total assets of 73% during 2010–2014. By contrast, ZTE chose to go against their previous business strategy and decided to pursue scale, leading to an increase in total assets of 21% in the same five-year period.

Table 4. Comparison between Huawei and ZTE's productivity from 2010–2014

(unit: million RMB).

Huawei (ESOP)	Sales	Total Assets	Total asset Turnover	***ZTE (non-ESOP)***	Sales	Total Assets	Total asset Turnover
2010	182,548	178,984	1.02	***2010***	69,907	84,152	0.83
2011	203,929	193,849	1.05	***2011***	86,255	105,368	0.82
2012	220,198	223,348	0.99	***2012***	84,119	107,446	0.78
2013	239,025	244,091	0.98	***2013***	75,234	100,080	0.75
2014	288,197	309,773	0.93	***2014***	81,471	106,214	0.77
Average	226,779	230,009	0.99	***Average***	79,397	100,652	0.79

Comparison of productivity between the two companies (Table 4) shows that the total asset turnovers of Huawei and ZTE are 0.99 and 0.79, respectively. The average asset turnover of Huawei is higher than that of ZTE. In addition, from 2010 to 2014, the productivity of Huawei employees is higher than that of ZTE. To further demonstrate the possible effect of the ESOP on productivity growth, we have provided another set of data in Table 5.

Table 5. Comparison between Huawei and ZTE's productivity from 2010 to 2014

(unit: million RMB).

Huawei (ESOP)	Number of Employees	Sales	Adjusted productivity growth	***ZTE (Non-ESOP)***	Number of Employees	Sales	Adjusted productivity growth
2010	111,856	182,548	1	***2010***	85,232	69,907	1
2011	141,230	203,929	0.88	***2011***	89,786	86,255	1.17
2012	148,450	220,198	0.91	***2012***	78,402	84,119	1.30
2013	152,500	239,025	0.96	***2013***	66,500	75,234	1.38
2014	168,890	288,197	1.05	***2014***	75,609	81,471	1.31
2010–2014	51%	+58%	+5%	***2010–2014***	−11%	16.5%	31%

Table 5 shows the data on Adjusted Productivity Growth (APG), i.e., sales per employee, which enables analysis of the micro-level productivity between the two companies. The APGs of Huawei and ZTE grew by 5% and 31% from 2010 to 2014, respectively. As far as employee headcount and sales are concerned, Huawei increased headcounts by about 57,000 during 2010–2014, an increase of 51%. Up until 2014, although the APG of Huawei grew by 5%, its sales grew by RMB 106 billion, an increase of 58%. During the same period, the APG of ZTE grew by 31%, but its employee headcount decreased from 85,000 to 75,000, a decrease of 11%. Meanwhile, sales of ZTE grew by RMB 11 billion, an increase of 16.5%. Although ZTE has higher APG than Huawei, ZTE achieved this result through headcount reduction. Huawei, on the other hand, expanded its headcount by 51% and suffered from a declining APG for a while. However, the company was able to turn around the trend within a short time and achieved an APG growth of 5% within five years.

The patterns emerging from the above four tables and the data on total assets turnover and APG show that Huawei continued to hold its competitive advantage over ZTE, and such competitive advantage seemed to have an increasing impact on the Huawei's performance. On the other hand, ZTE had ups and downs that added considerable uncertainty about the company's future. But, they did increase productivity through their restructuring.

Given that the two companies are in many of the same sectors with many of the same market opportunities, the results differed for the two companies while they adopted two different strategies and two different approaches to ownership.

For ZTE, the problems occurred when the company tried to drive growth by aggressively pursuing large-scale business operations at the cost of profit and margin, and then increasing profit and margin by aggressively reducing the total headcount. This strategy could be realized only because ZTE was controlled by a smaller group of shareholders. The chairman of the company had a high proportion of ownership and his personal will could directly influence the strategic decisions of the company. The decisions he made may not lead to a sustainable business model for ZTE.

For Huawei, the adoption of the ESOP helped the company align the interests of individual employees with that of the company. This strategy probably helped the company move through the hard times created by the financial crisis. At the same time, the company seized the strategic opportunity to facilitate a successful transition by developing new business markets and expanding the employee headcount, which resulted in effective growth. If the years 2006–2010 represented a period of organic growth and the years 2010–2014 represented a period of strategic growth for Huawei, then the adoption of the ESOP may have proved to be effective and contribute positively to the company's performance through both the organic and strategic growth stages.

5) Conclusions

By analyzing the 2010–2014 financial data of Huawei and ZTE, we have found that Huawei's ESOP may again have demonstrated its positive effect. When the financial crisis hit and the strategic market opportunity presented itself, Huawei was able to maintain its competitive advantage, with the ESOP perhaps contributing in the following four ways:

1) The adoption of the ESOP motivates employees by allocating share options, thereby encouraging them to work hard for long-term benefits. Under this scheme, employees are driven to create profits for the company and, at the same time, become more committed and loyal to the company. The ESOP is an important reason behind Huawei's ability to retain technology talent so that it can maintain its ability to innovate when the need arises.

2) The ESOP helps reduce possible friction and conflict between employer and employees, thereby reducing labor/management tension. Turning employees into shareholders helps increase the sense of responsibility because employees realize that making profits for the company is making profits for themselves. The ESOP changes the mentality of employees into one that encourages participation in decision-making. The superior value of the ESOP is even more obvious when the company faces difficult situations. For example, at critical times of change, Huawei employees were able to stand by the company, whereas its competitor had major upheaval in its employee headcount.

3) The ability of the ESOP to allocate and withdraw stock options based on performance helps improve productivity, as well as ensure that the firm's shares stay with the most productive and responsible employees. This system allows the company to invest in its strongest people and grow more effectively.

4) The ESOP binds the interests of employees with the long-term goals of the company. This situation makes it possible for employees to sacrifice their own short-term benefits for the company to gain long-term benefits. For example, a total of RMB 12.5 billion was made available in bonuses at Huawei in 2012. However, business group leaders from both the Huawei Enterprise and Consumer Groups decided to give up on their bonus because neither group was able to achieve the expected growth rate that year. With more efforts in the years that followed, Huawei succeeded in making the transition from a traditional single network business into a new business with multiple lines. According to Huawei's 2014 Annual Report, the 11 newly established markets within the Huawei Enterprise and Consumer Groups developed rapidly, accounting for 27% of the total Huawei revenue at year end.

The comparative analysis described in this paper is based on the financial data of Huawei and ZTE between 2010 and 2014. This paper further illustrates the positive effects of an ESOP on productivity, as originally suggested by Professor Hoffmire and his team at the University of Oxford. In addition, the analysis has also addressed the strategic shifts in 2011 and concluded that the ESOP may have large influence not only in helping the company through organic growth during times of stability, but also in supporting the company's strategic growth during times of change.

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