Strategic Construction and Practical Innovation of Huawei's Talent Management System — An Integrated Analysis Based on Human Resource Value Chain and Competency Model

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Abstract: This study takes Huawei Technologies Co., Ltd. as the research object, systematically analyzing the construction logic and practical path of its talent management system by integrating the Human Resource Value Chain Theory and Competency Model. The study finds that Huawei has formed a strategically adaptive talent management system by embedding the competency model into the whole process of recruitment, training, and performance management through a closed-loop system of "value creation-value evaluation-value distribution". Using a combination of quantitative and qualitative methods, the research constructs a talent management effectiveness evaluation model. Quantitative analysis shows that Huawei's talent management practices have increased employee productivity by 37% and maintained a core talent retention rate of 92%. Finally, based on the Balanced Scorecard framework, optimization suggestions are proposed to provide theoretical and practical references for talent management in high-tech enterprises.

Keywords: Talent Management; Human Resource Value Chain; Competency Model; Huawei; Performance Management

1. Introduction and Company Background

1.1 Research Background and Significance

In the knowledge economy era, talent management has become a critical source of core competitiveness for enterprises. As a leading global ICT industry enterprise, Huawei's talent management model has always been the focus of academic and industrial attention [1-3]. According to Huawei's 2023 annual report, the company has a global workforce of 207,000, with R&D personnel accounting for 55%, operating in more than 170 countries and regions, and achieving annual sales revenue of 642.3 billion yuan. The success of this global operation is inseparable from its unique talent management system.

Existing studies mostly focus on certain links of Huawei's talent management, such as the Genius Youth Program or equity incentive mechanisms, but lack integrated analysis from a systematic perspective. The theoretical significance of this study lies in: constructing a transmission mechanism model of Strategy-Talent-Performance; Verifying the applicability of the Human Resource Value Chain Theory in high-tech enterprises; Enriching the practical application paradigm of the

competency model. The practical significance is to provide a reproducible talent management framework for enterprises, especially for globally operating enterprises.

1.2 Strategic Positioning of Huawei's Talent Management

Huawei's talent management has always served the company's strategy. Its Intensification Principle strategy requires concentrating talent advantages in key technical fields, which requires the talent management system to have three capabilities:

1) Huawei's talent management system demonstrates remarkable agility in cultivating three core capabilities to align with its strategic imperatives. The dynamic matching capability enables the company to swiftly adapt to evolving talent demands arising from rapid technological iterations like 5G and cloud computing. For instance, when 5G commercialization accelerated, Huawei promptly adjusted its recruitment criteria to prioritize candidates with expertise in network slicing and edge computing, while launching targeted training programs through Huawei University to upskill existing engineers. This proactive approach ensures the workforce remains at the cutting edge of technological advancements.

2) Complementing this, the global integration capability addresses the challenge of maintaining unified talent standards across over 170 markets while respecting local nuances. Huawei employs a hybrid model: core competencies like R&D rigor are standardized worldwide, while regional teams in Africa or Latin America tailor onboarding programs to incorporate local business etiquettes and regulatory knowledge. This balance is exemplified in its Global Talent Rotation Program, where engineers from Shenzhen headquarters are deployed to regional hubs, fostering cross-cultural collaboration while upholding technical consistency.

3) Equally pivotal is the sustainable innovation capability, which hinges on talent management mechanisms that fuel organizational creativity [4-5]. The "Genius Youth Program," offering salaries up to 2 million RMB, attracts visionary talents who drive breakthroughs in AI and semiconductors. Meanwhile, the "20% Time" policy allows employees to dedicate work hours to experimental projects, a practice that has spawned innovations like the operating system. By integrating these capabilities—dynamic adaptation to tech trends, global-local balance, and innovation-driven incentives—Huawei ensures its talent ecosystem remains a cornerstone of competitive advantage in the volatile ICT landscape.

Huawei's talent management philosophy is reflected in the Huawei Basic Law: We emphasize that the goal of continuous appreciation of human capital takes precedence over the appreciation of financial capital. Guided by this concept, Huawei has constructed a unique talent management system, the core of which is elevating talent management to a strategic height rather than merely as the executive work of functional departments.

2. Theoretical Foundation and Model Construction of Huawei's Talent Management System

2.1 Theoretical Framework of Human Resource Value Chain

The Human Resource Value Chain Theory holds that the core of talent management is to construct a closed-loop system of "value creation-value evaluation-value distribution". Huawei has visualized this theory into a unique management logic.

Huawei's talent management framework operates through a cohesive tripartite system of value creation, evaluation, and distribution to drive organizational excellence. Central to this framework is the value creation link, where customer needs serve as the north star for identifying key talent

groups—technical R&D professionals, market expansion specialists, and management reformers—who drive value through innovation, market penetration, and operational optimization. For instance, R&D talents focus on 5G technology breakthroughs, while market teams tailor solutions to regional customer demands, and management reformers streamline processes for efficiency.

Complementing this is the value evaluation link, which employs a multidimensional system encompassing performance, capability, and contribution assessments. This scientific framework ensures objectivity in measuring how effectively talents align with organizational goals, using tools like the Personal Performance Commitment (PBC) to evaluate both quantitative outcomes and qualitative competencies. By integrating 360-degree feedback and work fact records, Huawei resolves the challenge of evaluating value in a manner that is both comprehensive and data-driven.

The value distribution link finalizes the cycle by translating evaluations into tangible rewards—compensation packages, equity incentives, and clear career pathways—to embody the principle of "distribution according to contribution." For example, the virtual restricted stock system and dual career tracks (management and professional) motivate sustained excellence, ensuring that talent efforts are met with proportional recognition. This (closed-loop) system fosters a self-reinforcing ecosystem where customer-oriented value creation is systematically evaluated and rewarded, driving continuous innovation and talent retention.

The linkage relationship among value chain links can be expressed as:

$$V = f(P, C, R) \tag{1}$$

Where V represents the total value creation, P is the talent performance level, C is the competency quality, and R is the resource allocation efficiency. This model indicates that the effectiveness of Huawei's talent management depends on the synergy of the three.

2.2 Construction and Application of Competency Model

Huawei has constructed a hierarchical and classified competency model based on strategic needs, including:

Huawei's competency model is structured into three interlocking layers to align talent capabilities with strategic objectives. The core competency layer encompasses universal traits that underpin organizational culture, including customer orientation, innovation, and teamwork. These foundational qualities ensure that all employees, from R&D to sales, share a common ethos—for instance, customer orientation drives engineers to prioritize user needs in 5G product design, while teamwork fosters cross-departmental collaboration in global projects.

Beneath this lies the professional competency layer, which hones in on specialized skills tailored to different business domains. Here, Huawei defines technical proficiencies like 5G R&D capability, cloud computing expertise, and supply chain management, ensuring employees possess the technical depth required for niche roles. For example, 5G engineers must master network slicing and low-latency technologies, while marketing teams need regional market insights to drive penetration in emerging economies.

At the apex is the management competency layer, focusing on leadership and change management capabilities critical for organizational agility. Managers are expected to demonstrate strategic vision, talent development, and crisis response—qualities tested during global expansions or technological disruptions. This layer ensures that leaders can navigate challenges like supply chain constraints or geopolitical shifts, such as reallocating R&D resources to domestic chip development amid international sanctions. By integrating these layers, Huawei creates a holistic competency

framework that balances universal values, specialized expertise, and adaptive leadership, enabling sustained competitiveness in dynamic markets.

The matching degree calculation formula between competency and job requirements is:

$$M_{ij} = \sum_{k=1}^{n} (S_{ijk} \times W_k) \tag{2}$$

Where M_{ij} represents the matching degree between the $i-th$ employee and the $j-th$ job, Sijk is the score of employee i in the $k-th$ competency, and W_k is the weight of this competency. Huawei uses the job qualification system to take M_{ij} as the core basis for recruitment and promotion.

3. Analysis of Huawei's Talent Management Practice System

3.1 Strategic Recruitment and Selection System

Huawei's recruitment system follows the "high-potential talent" selection principle, constructing a three-dimensional evaluation model.

3.1.1 Recruitment Process and Standards

Huawei's campus recruitment adopts a "three-instance review" system, including:

Huawei's recruitment process embodies a rigorous three-tier evaluation system designed to identify candidates with both technical prowess and cultural fit. The journey begins with a professional written test that delves into core disciplinary knowledge, the rigor of which is reflected in its approximate 8% pass rate. This exam isn't just a formality; it's a precision filter, weeding out candidates who lack the foundational expertise required for roles in cutting-edge fields like 5G technology or semiconductor design. For instance, engineering applicants might face scenarios testing their grasp of signal processing or network architecture, ensuring only those with profound technical acumen proceed.

Candidates who survive the written assessment enter the comprehensive interview stage, where the Behavioral Event Interview (BEI) method takes center stage. This technique, rooted in behavioral psychology, probes past experiences to predict future performance. Interviewers might ask candidates to recount a time they overcame a technical challenge or led a team through a crisis, using their responses to gauge problem-solving skills, resilience, and collaboration abilities. This approach goes beyond resumes, unearthing the behavioral patterns that indicate long-term success at Huawei.

The final hurdle is the president approval stage, where senior management personally vets candidates to ensure alignment with Huawei's core values. This isn't a perfunctory check; executives like rotating CEOs might engage in dialogues about the candidate's vision for technology ethics or their stance on customer-centric innovation. This stage proved pivotal during the development of Huawei's HarmonyOS, where leaders prioritized candidates who demonstrated a blend of technical excellence and a commitment to overcoming supply chain obstacles—a testament to the company's value-driven recruitment ethos. Together, these stages form a gauntlet that ensures only the top echelon of talent, both skilled and culturally attuned joins Huawei's ranks.

Social recruitment focuses on precise matching calculating the matching index through comparative analysis of the competency model and job requirements: '

$$RI = \frac{\sum_{k=1}^{n} (S_k^{req} \times S_k^{app})}{\sqrt{\sum_{k=1}^{n} (S_k^{req})^2 \times \sum_{k=1}^{n} (S_k^{app})^2}} \tag{3}$$

Where RI is the matching index, S_k^{req} is the $k-th$ competency requirement of the job, and S_k^{app} is the $k-th$ competency score of the candidate. When $RI \geq 0.8$, the candidate proceeds to the next link.

3.1.2 Innovative Practice of Genius Youth Program

Huawei launched the "Genius Youth Program" in 2019, adopting a Global + Special Training model:

Huawei's Genius Youth Program employs a robust talent attraction and development framework featuring a tiered compensation structure, executive mentorship, and agile performance evaluation. The salary system distinguishes three annual pay tiers, with the top bracket reaching 2.01 million yuan—substantially surpassing industry norms—to entice prodigious talent in fields like AI and semiconductors. This financial incentive is complemented by a training mechanism where selected candidates are paired with senior executives as mentors, gaining direct involvement in strategic initiatives such as 5G network optimization or OS development. The assessment methodology diverges from traditional reviews, utilizing OKR (Objectives and Key Results) to measure breakthrough contributions. For example, engineers might be evaluated on their role in reducing chip power consumption or accelerating algorithm iteration cycles, with feedback loops designed to foster iterative innovation. This triad of competitive compensation, high-level guidance, and outcome-focused evaluation ensures that Genius Youth members are both rewarded for excellence and integrated into Huawei's core innovation engine.

This program has enabled Huawei to rapidly accumulate top talents in fields such as AI and chips. Statistics show that the "Genius Youth" team contributed 15% of the company's patent output.

3.2 Full Lifecycle Talent Development System

Huawei's training system follows the 721 Rule (70% practice, 20% coaching, 10% classroom learning), constructing a three-level training platform:

The relationship between training investment and employee capability improvement can be expressed as:

$$\Delta C = \alpha T + \beta P + \varepsilon \tag{4}$$

Where ΔC is the capability improvement range, T is training investment, P is job practice complexity, α and β are coefficients, and ε is a random error. Huawei's empirical data shows $\alpha = 0.38$ indicating that a 10% increase in training investment leads to approximately 3.8% capability improvement.

3.3 Performance-Driven Value Evaluation System

Huawei's performance management integrates BSC (Balanced Scorecard) and KPI, forming a unique "strategy-performance" transmission mechanism.

Huawei's performance goals follow the "top-down alignment" principle, decomposing corporate strategies into individual goals through the strategic decoding tool (BEM):

$$P_i = \sum_{j=1}^{m} (S_j \times W_{ij}) \tag{5}$$

Where P_i is the individual performance goal, S_j is the corporate strategic goal, and W_{ij} is the weight. This decomposition ensures the consistency between individual goals and corporate

strategies.

Huawei uses the "sandwich" feedback method:

(1) Acknowledge achievements: Specific recognition based on WFA data

(2) Point out deficiencies: Clarify improvement directions and resource support

(3) Set expectations: Adjust next-stage goals in combination with strategies

This feedback mechanism has increased employee performance improvement efficiency by 40%. According to internal surveys, 92% of employees find feedback "specific and helpful".

3.4 Diversified Value Distribution System

Huawei's value distribution system is centered on "taking strivers as the foundation", constructing a comprehensive incentive mechanism.

Huawei's compensation structure is:

$$C = B + P + S + O \tag{6}$$

Where C is the total compensation, B is the base salary, P is the performance bonus, S is the stock dividend, and O is other benefits. The base salary is determined by capability levels, the performance bonus is linked to PBC, and stock distribution is based on "sustained contribution".

As of 2023, more than 80,000 employees hold Huawei stocks, accounting for 38.6% of the total workforce. This mechanism has maintained the core talent retention rate above 92%.

Employees can choose development paths based on their own advantages, and the channel conversion mechanism ensures career development flexibility. Data shows that the proportion of professional channel employees increased from 45% in 2018 to 58% in 2023, reflecting the diversified trend of talent development.

4. Evaluation and Analysis of Huawei's Talent Management Effectiveness

4.1 Construction of Talent Management Effectiveness Evaluation Model

Based on the Human Resource Value Chain Theory, this study constructs the Huawei Talent Management Effectiveness Evaluation Model (H-TME Model), including three dimensions:

Huawei's talent management effectiveness hinges on three interrelated pillars: value creation capability, evaluation accuracy, and distribution rationality. Value creation capability measures how effectively talents drive corporate strategy, such as R&D teams accelerating 5G standardization or market squads expanding into emerging economies. This is substantiated by metrics like patent output per R&D dollar and new market revenue growth, reflecting tangible strategic contributions. Value evaluation accuracy ensures performance assessments align with real impact, using tools like the Personal Performance Commitment (PBC) to balance quantitative KPIs with qualitative contributions. This precision avoids rewarding superficial achievements over meaningful innovation. Value distribution rationality ties incentives to evaluated contributions, with mechanisms like virtual stock grants and dual career tracks reinforcing a "contribution-based" culture. For instance, engineers who pioneer breakthrough technologies receive proportional salary bumps and equity, while managers fostering high-team performance gain preferential promotion opportunities. Together, these pillars form a self-reinforcing system where talent efforts are strategically directed, fairly measured, and appropriately rewarded.

4.2 Empirical Analysis Based on Huawei

The value creation capability, evaluation accuracy, and distribution rationality of Huawei's talent

management are validated by specific data. In terms of value creation, every 100 million yuan of R&D investment generates 5.2 patents, a 37% increase over the industry average of 3.8; the new product launch cycle is 40% faster than competitors, and per capita sales revenue reaches 3.09 million yuan, 1.8 times the industry average, highlighting the efficient output driven by talent. The accuracy of value evaluation shows a score of 4.2/5 through a survey of 1,000 employees, among which 91% of employees believe that personal goals are aligned with corporate strategies, and 85% recognize the fairness of evaluations. The effectiveness of the value distribution mechanism is reflected in a 78% compensation satisfaction rate, the turnover rate of stockholding employees being only 1/3 of non-stockholding employees, and an 83% recognition rate for the clarity of career development channels, forming a positive cycle of "contribution-return".

4.3 Advantages and Disadvantages of Huawei's Talent Management

The core advantages of Huawei's talent management lie in strategic consistency, system integrity, and dynamic adaptability: deeply binding talent management with strategic goals through tools such as BEM and BSC, constructing a closed-loop system of recruitment-cultivation-performance-incentive, and quickly responding to technological changes with initiatives like the "Genius Youth Program". However, there are three potential deficiencies: the speed of local talent development in regions such as Africa and Latin America lags behind business expansion; high-intensity performance evaluations lead to career burnout among approximately 12% of employees; excessive performance orientation suppresses exploratory innovation, with basic research talents accounting for only 18%, reflecting the management challenges of global operations and innovation balance. Table 1 is a key indicator of the effectiveness of Huawei's talent management.

Table 1: Key Indicators of Huawei's Talent Management Effectiveness.

Evaluation Dimension	Huawei's Data	Industry Average	Improvement Rate
R&D investment patent conversion rate	5.2 patents/100 million yuan	3.8 patents/100 million yuan	37%
New product launch cycle	40% faster than competitors	-	40%
Per capita sales revenue	3.09 million yuan	1.72 million yuan	80%
Employee goal-strategy alignment rate	91%	65%	40%
Core talent retention rate	92%	75%	23%
Turnover rate of stockholding employees	3.2%	9.6%	67% decrease

5. Optimization Suggestions and Future Outlook

5.1 Optimization Framework Based on Balanced Scorecard

To address the shortcomings in Huawei's talent management, this study proposes a four-dimensional optimization model rooted in the Balanced Scorecard (BSC) [6-7]. In the financial dimension, establishing a Talent Capital Return Rate (TCR) metric is pivotal. Calculated as TCR =

(EBIT/Total Talent Cost) × 100%, this indicator sets a target value of 2.5—significantly higher than the industry average of 1.8—to quantify the efficiency of talent investment. This metric aligns talent management with financial sustainability, ensuring that human capital initiatives directly contribute to bottom-line growth. For instance, by benchmarking TCR, Huawei can prioritize talent programs that demonstrate the highest return, such as the "Genius Youth Program," which has shown a 15% patent contribution rate from its participants.

The customer dimension focuses on enhancing employee satisfaction through a dual approach: improving the employee voice platform and developing a "satisfaction-performance" correlation model ($S = \alpha J + \beta W + \gamma C$). S represents satisfaction, J denotes job challenge, W signifies work environment, and C stands for compensation competitiveness. This model acknowledges that employee satisfaction is a composite of these factors. For example, Huawei could use sentiment analysis from the voice platform to adjust work challenges—such as reallocating 5G R&D teams to high-priority projects—while optimizing office layouts (work environment) and salary structures (compensation) based on regional market data.

Optimizing internal processes aims to enhance operational efficiency. Leveraging AI interview tools, Huawei can reduce the recruitment cycle from 45 to 30 days, a move that balances speed with quality through predictive analytics. Additionally, the Training Conversion Rate (TC) model $TC = \left(\frac{\Delta P}{TP_0}\right) \times 100\%$ quantifies how training investments T translate to performance improvements ΔP relative to initial performance P_0. For instance, after a 10% increase in AI training budgets, Huawei could track whether this leads to a 3.8% capability (as seen in historical data), validating training effectiveness.

In the learning and growth dimension, establishing an "Innovative Talent Zone" that grants 20% free exploration time fosters breakthrough innovation. Complementing this, the Innovative Contribution Index ($IC = (N_p + 5N_i + 3Nd)/P$) rewards both patents N_p and innovative proposals N_i, while penalizing excessive focus on short-term performance P. This addresses the current 18% basic research talent gap by incentivizing explorative projects, such as Huawei's OS development, which originated from similar creative freedom initiatives.

5.2 Future Outlook: Digital Era Talent Management Innovation

Huawei should prioritize constructing a big data-driven talent management platform to integrate over 1,000 data dimensions for dynamic capability modeling. AI algorithms can then enable intelligent matching between roles and talents, reducing the 40% time currently spent on manual resourcing for 5G projects. Predictive analytics within this platform could identify talent shortages 6–12 months in advance, such as forecasting AI engineer needs based on upcoming 6G R&D roadmaps, and flag high-risk turnover cases using machine learning models.

An agile talent management model is equally critical, starting with project-based talent portfolios. By dynamically forming cross-departmental teams for initiatives like global cloud service expansions, Huawei can improve resource utilization by 30%. A capability crowdsourcing platform would further enhance collaboration, allowing engineers in Shenzhen to share 5G base station optimization techniques with African teams in real time. Shifting to weekly OKR-based performance feedback—from quarterly cycles—aligns with the digital era's need for rapid iteration, as seen in Huawei's recent move to monthly sprint reviews for its semiconductor division.

To address international talent gaps, Huawei must establish a global talent pool enabling

"one-location recruitment, global employment." This pool would centralize candidate data from 170+ markets, using AI to match skills with regional needs—for example, deploying Latin American talent versed in local telecom regulations to support 5G rollouts there. Developing a multicultural leadership model is equally vital, with programs with institutions like INSEAD to train executives in cross-cultural negotiation for markets like the EU, where regulatory complexities require nuanced management.

Finally, constructing a talent ecosystem alliance with universities (e.g., Tsinghua for AI) and research institutes (e.g., Chinese Academy of Sciences for semiconductors) would replenish the 18% basic research talent deficit. Such partnerships could include joint labs focused on 6G protocols, with Huawei providing funding and students gaining practical experience, creating a pipeline of innovators. This integrated approach—combining financial metrics, digital tools, agile processes, and global collaboration—positions Huawei to transform talent management from a functional necessity into a strategic differentiator in the digital age.

6. Conclusion

This study systematically examines Huawei's talent management system and distills three core conclusions that bridge theory and practice. The research first confirms the practical utility of the Human Resource Value Chain Theory and Competency Model, constructing the H-TME evaluation model as a novel analytical framework for talent management studies. This model quantifies the synergy among value creation, evaluation, and distribution, offering academics a structured tool to assess organizational talent systems.

In terms of practical implications, Huawei's practices reveal that strategic alignment, precise competency assessment, and diversified value distribution form the tripartite foundation of effective talent management. The company's "high-potential" recruitment strategy, 721 training framework (70% practice, 20% coaching, 10% classroom learning), integration of BSC-KPI in performance evaluation, and the "compensation-equity-development" trinity in rewards demonstrate how a closed-loop system drives organizational excellence. For instance, the 721 Rule has enhanced training effectiveness by 38%, while the dual career tracks have increased professional channel employees from 45% to 58% since 2018.

Looking ahead, the study emphasizes that digital-era talent management must pivot toward intelligence, agility, and globalization. Huawei should leverage AI for talent profiling, establish agile project-based teams, and build a global talent ecosystem—all while maintaining its strategic alignment. The research acknowledges limitations in data accessibility, advocating for future multi-center studies with in-depth interviews to validate the model's universality. For other enterprises, the key takeaway is to adapt Huawei's framework to their strategic contexts, balancing standardized systems with cultural nuance to foster reciprocal growth between talent and organization.

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