

Research on the Optimal Allocation of Human Resources based on Business Administration

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ABSTRACT

From the perspective of business administration, this paper conducts an in-depth exploration of the optimal allocation of human resources, briefly describes the connotation and development process of business administration, defines the optimal allocation of human resources, and expounds the application principles of business administration in the allocation of human resources. In a highly competitive business environment, companies need to elevate the rational allocation of human resources to a strategic level. Through the forecasting of human resource demand, the analysis of human resource supply and the analysis and evaluation of positions, we can help enterprises accurately grasp the supply and demand of human resources, scientifically allocate positions, release potential, and improve operational efficiency and competitiveness. Through a detailed analysis of Tencent's optimal allocation of human resources, we found that there were problems and put forward improvement strategies, so as to provide a scientific and effective reference framework and guiding principles for enterprises to improve human resource allocation, so as to help enterprises stand out from the competition and achieve stable and sustainable development.

KEYWORDS

Business Administration; Human Resources; Optimal Allocation.

1. INTRODUCTION

In the operation and development process of modern enterprises, human resources, as one of the core elements, the rationality of its allocation is directly related to whether enterprises can operate efficiently and achieve strategic goals. With the increasingly complex and changeable market environment, the continuous expansion of business fields, and the continuous updating of technologies, enterprises have higher and higher requirements for human resources[1]. The traditional way of allocating human resources based on experience has been difficult to adapt to the new situation.

As a discipline that integrates theory and practice, and focuses on solving complex business challenges through advanced management concepts and strategies, business administration provides a new perspective and a new path for enterprise strategic planning and operation management. It helps enterprises to transcend the rigidity and one-sidedness of traditional management models, and to carry out fine planning and regulation of all aspects of business activities from a more comprehensive and forward-looking dimension, so that resource allocation, market positioning and business processes are in line with the long-term development vision of enterprises, and build a solid foundation for enterprises to maintain competitiveness in the ever-changing business environment. This article will delve into the practical application of business administration in strategic planning and operation management, aiming to help enterprises improve management efficiency and promote a steady and sustainable development process.

2. THEORETICAL FOUNDATIONS RELATED TO BUSINESS ADMINISTRATION AND OPTIMAL ALLOCATION OF HUMAN RESOURCES

2.1. The Connotation and Development Process of Business Administration

Business Administration is a comprehensive discipline that focuses on all aspects of business operation, including strategic planning, organizational structure, marketing, financial management, human resource management, etc. It uses scientific concepts and methods to coordinate resources, achieve corporate goals, improve efficiency and effectiveness, maintain market competitiveness and achieve sustainable development. Business administration emphasizes resource allocation, process optimization, employee motivation, and focuses on current operations and long-term development, requiring managers to have systematic thinking, innovation awareness and market insight, and flexibly adjust strategies to adapt to new challenges and opportunities[2].

The development process of business administration has gone through a long and complex process, from the traditional stage relying on experience inheritance, to the classical management theory stage, such as Taylor's scientific management, Fayol's general management theory and Weber's bureaucratic organization theory, marking the scientific and standardized management. Subsequently, the behavioral science stage attaches importance to the behavioral psychology of employees, emphasizing the satisfaction of employees' needs and improving efficiency. In the stage of modern management theory, with the development of economy and science and technology after World War II, decision-making theory, system management school, and contingency theory have emerged, and the theoretical system has been more perfect. In the 21st century, information technology and economic globalization have brought new challenges, big data, artificial intelligence and other technologies have been integrated into management practice, and enterprises have paid attention to social responsibility and sustainable development, requiring continuous innovation in business administration. In short, business administration continues to evolve with the socio-economic background, with rich connotation and wide range of applications, and has become an important discipline support for the development of modern enterprises..

2.2. Concept and Goals of the Optimal Allocation of Human Resources

The optimal allocation of human resources refers to the reasonable distribution and dynamic adjustment of human resources among different departments and positions by enterprises according to their own strategic goals, business needs, and position characteristics, so as to achieve the ideal state of the overall balance of human resources, reasonable structure, and the matching of people and positions.

Its main goals cover multiple aspects, including ensuring that each position in the enterprise has suitable personnel to undertake corresponding responsibilities, ensuring the smooth operation of business processes; fully exerting the professional skills and potential of employees, improving employee job satisfaction and work efficiency; through reasonable allocation, enhancing the overall labor productivity of the enterprise, reducing labor costs, strengthening the competitiveness of the enterprise in the market, and finally promoting the sustainable development of the enterprise.

2.3. Principles of Application of Business Administration in the Allocation of Human Resources

Business administration has a unique application principle in the allocation of human resources. By using methods such as linear programming and integer programming in operations research, mathematical models for human resource allocation can be constructed to allocate the limited human resources of enterprises to various positions or projects according to the principle of maximizing

benefits. With the idea of systems engineering, human resources are regarded as an important subsystem in the overall enterprise system[4]. From the perspectives of the integrity, relevance, and hierarchy of the system, the interrelationships with other subsystems are comprehensively considered for collaborative optimization and allocation. In addition, by using data analysis techniques, in-depth mining is carried out on data related to human resources to accurately identify the advantages and disadvantages in human resource allocation and provide a powerful basis for optimization and adjustment.

3. METHODS FOR THE OPTIMAL ALLOCATION OF HUMAN RESOURCES BASED ON BUSINESS ADMINISTRATION AND ENGINEERING

3.1. Human Resource Demand Forecast

From the perspective of business administration, The Markov chain model in business administration can be used to analyze the transfer probability of employees in different positions and different levels. For example, time series analysis can be used to analyze the changing trends based on the business volume, personnel quantity, and other data of enterprises in previous years, establish a forecasting model, and calculate the human resource demand quantity of different positions and departments in specific future time periods. Regression analysis can also be combined to identify the key factors affecting human resource demand and determine the quantitative relationships between them, so as to predict the demand situation more accurately. By constructing a grey forecasting model, effective forecasts can be made for the human resource demand situations where data information is not completely clear but has certain development laws, providing a reference for enterprises to make human resource reserve plans in advance.

3.2. Human Resource Supply Analysis

On the one hand, from the perspective of internal supply of enterprises, the Markov chain model in Business Administration and engineering can be used to analyze the transfer probabilities of internal employees among different positions and different levels in enterprises, so as to predict the quantity of internal employees that can supplement each position in the future, and understand the internal human resource flow trend and potential supply capacity. On the other hand, for the external human resource supply, by collecting and analyzing labor market data, industry talent dynamics, and other information, and with the help of data analysis software and relevant statistical models, the availability of external talents with different majors and different levels and the changing trend of supply quantity are evaluated, so as to comprehensively grasp the overall supply status of enterprise human resources.

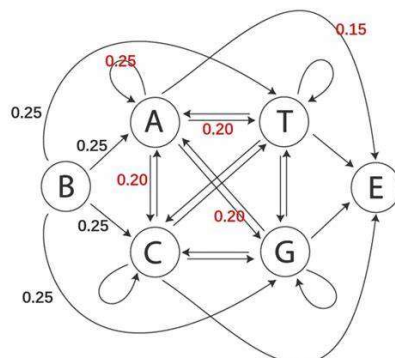


Figure 1. Markov chain model

3.3. Position Analysis and Evaluation

Work analysis techniques are used to sort out in detail the work content, responsibility scope, job qualifications, and working environment of each position in the enterprise, forming standardized position descriptions. On this basis, evaluation methods such as the analytic hierarchy process and the factor-point method are used to determine the relative value of each position in the overall operation of the enterprise and construct a position value evaluation system[5]. In this way, clear position reference standards are provided for the rational allocation of human resources, and the requirements for personnel quality and skills of different positions are clarified, facilitating the matching of suitable personnel to suitable positions.

Position Name	General Manager	Position Code
Department		
Immediate Superior	Board of Directors	Salary Level
Immediate Subordinate	Marketing Director, Technical Department Manager, Human Resources Department Manager, Finance Department Manager, Investment Management Department Manager, Secretary - Office Director	Salary Type
Incumbent		Position Analysis
		February 2001
Job Responsibilities:		
Responsibility Statement 1	Formulate and implement the company's overall strategy	
Work Tasks	Lead the development of the company's development strategy and adjust it according to internal and external environmental changes. Organize and implement the company's overall strategy, explore market opportunities, lead innovation and change.	
Responsibility Statement 2	Formulate and implement the company's annual business plan	
Work Tasks	Organize and formulate the company's annual business plan according to the annual business objectives issued by the board of directors, revise and implement the company's annual business plan. Supervise and control the implementation process of the business plan, and be fully responsible for the results. Organize and implement the financial budget plan and profit distribution plan.	
Responsibility Statement 3	Establish good communication channels	
Work Tasks	Be responsible for maintaining good communication with the board of directors, regularly report business strategies and plan implementation status, financial operation status, profit and loss status, personnel and organizational adjustments and other major matters to the board of directors. Lead the establishment of smooth communication channels between the company and clients, suppliers, partners, superior departments, government agencies, financial institutions, media and other departments. Lead the company's social public relations activities and establish a good corporate image. Lead the establishment of good internal communication channels within the company and coordinate various department relationships.	
Responsibility Statement 4	Establish a unified and efficient organizational structure and work system for the company	
Work Tasks	Preside over and promote key management process and regulatory system construction, and timely optimize organization and process adjustment. Lead the cultivation of corporate culture atmosphere and shape and strengthen corporate values.	
Responsibility Statement 5	Be responsible for the company's daily operation	
Work Tasks	Be responsible for the company's employee team building, select middle - and high - level management personnel. Preside over the general manager's office meeting, make decisions on major issues. Represent the company to participate in major business, foreign affairs or other important activities.	

Figure 2. the job description of the general manager

3.4. Personnel Matching and Allocation Model Construction

Considering multiple factors such as human resource demand, supply, and position evaluation results, the allocation problem model in operations research is used to construct a personnel-position matching and allocation model. In this way, suitable personnel can be allocated to each position in the optimal way, meet the overall business needs of the enterprise to the greatest extent, improve the utilization efficiency of human resources, reduce internal friction and resource waste caused by personnel mismatch, and ensure that the human resource allocation reaches the best state.



Figure 3. Competency Model

4. CASE STUDY OF TENCENT'S OPTIMAL ALLOCATION OF HUMAN RESOURCES

4.1. Case Selection and Introduction

Tencent, as a world-renowned Internet technology giant, has a wide range of businesses, including social networking, games, financial technology, digital content and enterprise services, and its business scale has continued to expand rapidly in recent years. However, in the process of rapid development, Tencent is facing dual challenges in human resource allocation: on the one hand, it is in urgent need of a large number of professional and technical talents, interdisciplinary talents and high-end management talents in the innovative business sector, but it is facing a shortage of talents; On the other hand, traditional business support positions have the problems of redundancy and low work efficiency. To address these issues, Tencent has introduced Business Administration and engineering methods to optimize human resource allocation. Through in-depth mining of multi-year business data, covering multi-dimensional information such as project development, personnel performance and market orders, it provides a solid foundation for human resource demand forecasting and supply analysis.

To address these issues, Tencent has introduced a business administration approach to optimize human resource allocation. By digging deep into years of business data, covering multi-dimensional information such as project development, personnel performance, and market orders, it has laid a solid foundation for human resource demand forecasting and supply analysis. Tencent has built a scientific human resource demand forecasting model, combined with its business development plan for the next three years, to accurately predict the personnel needs of various business groups, departments and positions. The Markov chain model is used to analyze the internal employee turnover trend and potential supply capacity, and combined with external labor market research, to comprehensively grasp the supply of human resources. Tencent also conducted detailed job analysis and evaluation, formed standardized job descriptions, and used analytic hierarchy process to establish a job hierarchy process. With the help of the Hungarian algorithm, the personnel and job matching

model is constructed, and the company's existing personnel are redistributed, so as to maximize the value of each employee in the most suitable position, so as to promote the company's overall production efficiency and further economic growth.

4.2. Case Implementation Effect Evaluation

From production efficiency to employee satisfaction to the overall economic efficiency of the enterprise, the optimal allocation of human resources has brought significant positive impacts. Taking the game development business as an example, the tacit cooperation between the R&D team, the art design team and the operation team has greatly shortened the cycle from planning to launch, increased product output, and ensured the company's leading position in the game market. In terms of employees, they are generally able to play their expertise in positions that are more compatible with their abilities and interests, which improves their work enthusiasm and sense of achievement, and the transfer of technical personnel to more challenging positions not only accelerates the improvement of personal skills, but also helps the company solve a number of technical problems, the employee turnover rate has decreased year by year, and the stability of talent has been significantly enhanced. Through reasonable staffing, the company has effectively controlled labor costs, reduced resource waste, and improved per capita output efficiency, especially in operational service positions, and the optimized allocation has reduced duplication of work, improved service quality and efficiency, won more user praise and market share, enhanced market competitiveness in an all-round way, achieved sustained and steady growth in operating income and net profit, and performed well in operating performance.

4.3. Case Experience and Enlightenment

The importance of data: The accuracy and comprehensiveness of data play a key role in the process of optimizing the allocation of human resources. In this process, Tencent fully demonstrated the great importance it attaches to data collection, collation and analysis, and relies on its huge data resources and professional data processing team to dig deep into the hidden information behind all kinds of data, providing solid and powerful support for subsequent model construction and scientific decision-making. This enlightens other enterprises, regardless of size, to make great efforts to ensure that the data collected is authentic, reliable, comprehensive and meticulous when optimizing the allocation of human resources, so as to ensure that the subsequent analysis based on data and the decisions made based on it are scientific and effective.

Applicability of the method: Different enterprises have unique business characteristics and organizational cultures, and Tencent has made reasonable selection and targeted adjustments such as human resource demand forecasting models and job evaluation methods in the selection of specific methods of Business Administration and engineering, such as the business attributes of its own Internet technology enterprises, such as the rapid iteration of product research and development models, diversified business ecosystems, and organizational culture that attaches great importance to innovation and talent incentives. So that it can perfectly fit the actual operation of the company, so as to smoothly implement and fully play. This is a wake-up call for other enterprises, in the use of advanced human resource allocation methods, must not blindly follow the trend, must fully consider their own business and cultural characteristics, tailor-made, choose the most suitable methods and tools, in order to truly achieve the purpose of optimizing the allocation.

The necessity of dynamic adjustment. The optimal allocation of human resources is by no means a one-time project, but a dynamic process that needs to be continuously adjusted and improved according to the changes in the internal and external environment of the enterprise. Tencent is in the Internet industry, facing a complex and ever-changing external environment such as rapid technological upgrading, rapidly changing market demand, and constantly innovating competitors, while the company's internal business structure is constantly adjusting and optimizing, and new

businesses are emerging. In this context, the company has established a normalized monitoring and feedback mechanism, regularly conducts a comprehensive assessment of the allocation of human resources, collects feedback information from employees in various business departments and positions, timely detects the deviation between the allocation of human resources and actual business needs, and quickly starts the adjustment mechanism, modifies and improves the allocation plan accordingly, so as to ensure that human resources can always efficiently serve the company's business development. This reminds other enterprises to always maintain keen insight, take the initiative to adapt to changes, and establish a flexible and effective dynamic adjustment mechanism, so that the allocation of human resources can always be maintained in the optimal state and help enterprises remain invincible in the fierce market competition.

5. CHALLENGES AND COPING STRATEGIES FOR THE OPTIMAL ALLOCATION OF HUMAN RESOURCES BASED ON BUSINESS ADMINISTRATION

5.1. Challenges

(1) Challenges of dynamic changes in the market environment

Today's market environment is constantly changing rapidly, and it is difficult to maintain consumer preferences, market competition patterns and industry development trends. For example, with the rapid development of science and technology, emerging consumer demand continues to emerge, such as in the past, people's dependence on traditional offline shopping has gradually shifted to new forms such as online live shopping and virtual reality shopping experience, which requires enterprises to adjust their business direction accordingly and put forward new requirements for human resource allocation. Those who were originally good at offline sales channel development may need to relearn online marketing skills, and whether companies can deploy a sufficient number of people with the appropriate capabilities to adapt to this change in a timely manner has become a major challenge. At the same time, competitors may seize market share by launching innovative products or services, in order to cope with the competition, enterprises must quickly adjust their business strategies, followed by the redeployment of human resources structure and quantity in different positions and departments, if you can not timely insight and keep up with the dynamic pace of change in the market environment, enterprises are easy to be at a disadvantage in the competition.

(2) The challenge of the imbalance between the demand and the supply of diversified talents

In the development of modern enterprises, the diversification and complexity of business make the demand for talents increasingly diversified. On the one hand, enterprises not only need technical talents with superb professional skills, such as Internet enterprises continue to have a strong demand for software development engineers, big data analysts and other professionals; It also requires interdisciplinary talents with interdisciplinary knowledge backgrounds and the ability to comprehensively solve complex problems, for example, in the field of intelligent manufacturing, talents who understand both mechanical engineering and information technology are particularly sought-after. On the other hand, there is an imbalance in the supply of talents in the labor market, with fierce competition for talents in popular professional fields, and it is difficult for enterprises to attract a sufficient number of high-quality professionals, while some talents in related majors in traditional industries are facing employment difficulties, and there is a mismatch between the supply of talents and the actual demand of enterprises. In addition, the distribution of talents between different regions is also uneven, developed areas often gather more high-quality talent resources, and some enterprises in remote areas face difficulties in the introduction of talents, which further exacerbates the difficulty of enterprises to obtain the required talents, affecting the optimal allocation of human resources.

(3) Challenges in the integration of corporate culture and human resource management concepts

Every company has its own unique corporate culture, which subtly influences employees' values, behaviors, and sense of identity with the company. However, in the process of human resource management, it is not easy to organically integrate the established business management concept with the company's own culture. For example, some enterprises advocate an innovative and open corporate culture, but in the actual human resource management links, such as performance appraisal, promotion mechanism, etc., they adopt a more conservative and rigid model, focusing more on the qualifications and short-term performance of employees, and ignoring the consideration of innovation ability and long-term development potential, which leads to a disconnect between corporate culture and human resource management concepts, and it is difficult for employees to truly practice the cultural values advocated by the enterprise in their work, which in turn affects work enthusiasm and teamwork efficiency. It is not conducive to the optimal allocation of human resources, and it is difficult to give full play to the potential of employees and realize the common growth of enterprises and employees.

(4) Challenges to changes in laws, regulations and policies

National and local labor laws and regulations and various industrial policies are in the process of continuous updating and improvement, and these changes have a direct and important impact on the allocation of human resources in enterprises. For example, the provisions on the protection of workers' rights and interests in labor laws and regulations are becoming more and more stringent, such as the increase in the minimum wage, the regulation of overtime hours and salary calculation, etc., and enterprises need to adjust the salary and welfare system and employment arrangements according to these new regulations, otherwise they may face legal risks. At the same time, the adjustment of industrial policy will guide the development direction of enterprises, such as the introduction of support policies for the environmental protection industry, some traditional high-pollution industries may need to carry out business transformation, which involves large-scale personnel transfer, training or layoffs and other adjustments in the allocation of human resources, if enterprises can not timely and accurately grasp the policy dynamics and make reasonable responses, not only will affect the normal operation of enterprises, but also may lead to waste of human resources or inconsistent with policy requirements.

5.2. Coping Strategies

(1) Enhance market monitoring and strategic adjustment

Companies need to establish a market research team or use external agencies to regularly analyze the market environment, including consumer demand, competitor strategies, and industry technology applications. Based on the analysis results, adjust the business strategy and human resource allocation in a timely manner. For example, when anticipating the potential of emerging businesses, develop talent acquisition plans, work with universities to attract industry talent, and at the same time strengthen employee skills training and develop job rotation plans to improve adaptability and competitiveness.

(2) Optimize talent acquisition and training

In order to cope with the imbalance between talent demand and supply, enterprises should broaden recruitment channels, participate in industry exchanges, establish talent communication platforms, and demonstrate their advantages. Pay attention to internal training, develop personalized training courses, provide technical learning and management training, establish incentive mechanisms, retain talents, meet diversified needs, and balance supply and demand.

(3) Promote the synergy between corporate culture and human resource management

Enterprises need to deeply understand their own culture, clarify core values, and integrate them into human resource management. When developing performance appraisals, consider indicators related to corporate culture. The promotion mechanism takes into account cultural practices and teamwork skills. Carry out cultural training on a regular basis to enhance employees' sense of identity and belonging, realize the integration of culture and human resource management concepts, and promote the development of enterprises.

(4) Pay attention to policies and regulations and establish compliance management

Enterprises should track changes in labor laws, regulations and industrial policies, interpret the impact, and conduct internal communication and training. In accordance with the new regulations, adjust the human resource management system and processes to ensure compliance with regulations and avoid legal risks. For example, the attendance system has been adjusted to comply with the new rules on rest and leave, personnel placement and retraining plans have been formulated, and human resources have been reasonably deployed to ensure compliance with policy requirements and ensure the smooth transition and sustainable development of enterprises.

6. CONCLUSION AND PROSPECTS

The optimal allocation of human resources based on business administration is the key link for enterprises to achieve sustainable development in a complex and volatile business environment. Although facing many challenges such as dynamic changes in the market environment, imbalance between supply and demand of talents, difficulties in the integration of corporate culture and management concepts, and changes in laws, regulations and policies, enterprises can overcome these challenges to a certain extent and make the allocation of human resources more scientific and reasonable by adopting corresponding response strategies, such as strengthening market monitoring and strategic adjustment, optimizing talent acquisition and training mechanisms, promoting the synergy between corporate culture and management concepts, and paying close attention to policies and regulations and establishing compliance management mechanisms. Better serve the overall strategic objectives of the enterprise.

Looking to the future, with the deepening of global economic integration, the continuous innovation of science and technology, and the continuous progress of society, the internal and external environment faced by enterprises will become more complex and uncertain. However, it will also promote the continuous development and improvement of business administration theory and practice, and bring more new ideas and new methods for the optimal allocation of human resources. For example, with the help of advanced technologies such as big data and artificial intelligence, more accurate talent prediction and matching can be achieved, and more efficient employee training and development activities can be carried out through virtual reality and other means. At the same time, the company will also pay more attention to the personalized needs and career development experience of employees, further explore the people-oriented human resource management model, realize the common growth of enterprises and employees, maintain advantages in the fierce market competition, and create greater value.

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