**2.** **Statistical analysis model and constraint parameter analysis of the performance evaluation of government administrators**

**2.1. Statistical analysis model of performance evaluation of government administrators**

Performance management is a kind of concept put forward in the 1970s. Since it was put forward, all walks of life have carried on the thorough discussion to the performance management. In the 90's of last century, the theory of performance management matured gradually. In essence, performance management is a representative of ideas and concepts, and a series of problems related to enterprise performance are systematically considered around how to develop and operate effectively. Performance management involves enterprise planning, strategy, organization, strategic development, motivation, leadership and so on. Government administration is an organization that plays the role of guarantee and service in the management system, and it is also the organization that exerts the organizational function and the leading function. Therefore, the administration of the government to the top and bottom of the business activities, capital management and other implementation coordination[9-10].

First of all, it is necessary to construct the data sampling information flow model of government administrators' performance evaluation, and combine the statistical characteristic analysis and descriptive statistical decision analysis method to model the performance evaluation of government administrators[11-13]. According to the above analysis, the overall implementation process of performance evaluation modeling of government administrators based on AHP is shown in Figure 1.

The nonlinear statistical feature sequence analysis method is used to analyze the characteristics of the performance evaluation modeling data of the government administrators and the statistical modeling[14-16]. Firstly, the original data collection of the performance of the government administrators is carried out. By using the principal component characteristic analysis model method of the performance evaluation of the government administrative personnel, the regression test model of the performance evaluation model of the government administrative personnel is expressed as follows:

 (1)

Combined with the auto-regressive moving average (ARMA ()) model for descriptive statistical analysis of large data government administrative personnel management effectiveness of the government administrative personnel to the statistical performance evaluation model for distribution:

 (2)

 In which,  is the mean value of 0, and the variance is ,  are the performance correlation distribution data of the government administrators.  are called the descriptive statistical average coefficient of the government administrative staff management, and the statistical analysis method is used to match the characteristics. According to the statistical results of the above sample descriptive statistical analysis, the performance evaluation model of government administrators is established under the model of AHP[17-19].

**2.2. Analysis of the explanatory variables of the performance evaluation of government administrators**

 On the basis of big data analysis of government administrative personnel management, the optimal design of performance evaluation model of government administrative personnel is carried out, and a performance evaluation model of government administrative personnel based on hierarchical analysis is proposed in this paper. Combining the results of descriptive statistical average analysis, the regression test of the performance evaluation of government administrators is carried out, and the test statistics are obtained:

 (3)

In which, , ,  are constant, indicating the decision-making statistical parameters of the performance of government administrators. By using *F* test method, the characteristic statistical function of the optimal government administrators' performance decision is recorded as follows:

 (4)

The adaptive fuzzy scheduling method is adopted to classify and identify the performance data of the government administrators, and the recognition function is expressed as follows:

 (5)

A hierarchical analysis and quantitative evaluation model of the performance of government administrators is established[20,21]. Combined with the method of information fusion, the statistical distribution model of the optimal performance of government administrators is obtained as follows:

 (6)

 (7)

According to the results of descriptive statistical analysis, the effectiveness of the management of government administrators is evaluated, and a quantitative evaluation model of the performance of government administrators is established[22-23].