Research on the current situation of peasant-workers in construction industry based on AHP

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Abstract

This paper establishes evaluation indexes system of the construction peasant-workers' current situation in the principle of Maslow's hierarchy theory of needs. Then, it analyzes the weight of each evaluation index on the basis of the AHP model, and evaluates the current situation of the peasant-workers with fuzzy comprehensive evaluation method. Through the analysis, we can grasp the key indexes affecting the management of the peasant-workers in construction industry. Finally, the article proposes several incentive measures about the management of the peasant-workers in aspects of salary, security and enterprise culture for the purpose of strengthening the management of the peasant-workers with limited resources.

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1. Introduction

In recent years, with the rapid development of Chinese economy, there is a substantial increase in construction labor demand. The diversification of the employment forms and the participants in construction industry make it complicated in the management of the peasant-workers .The management of the peasant-workers is a complex social system project and doing the job well is not only solving the "three rural" issue, maintaining the legal rights of the peasant-workers, but also realizing the management goals and promoting sustainable and healthy development of the construction industry. This paper utilizes Analytical Hierarchy Process (AHP) to study the index about the management of the peasant-workers, and applies fuzzy comprehensive evaluation method to propose targeted measures as a new way trying to improve the management level of the peasant-workers in construction industry.

2. Evaluation index system of the peasant-workers' current situation in construction industry

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2.1. The principle of establishing evaluation index system

This paper establishes index system of the management of the peasant-workers in the principle of Maslow's hierarchy theory of needs. Maslow's hierarchy theory of needs, known as the basic hierarchy theory of needs, is one of the behavioral science theories. It is proposed by the American psychologist Abraham Maslow in the paper of *theory of human motivation* in 1943[1]. According to this theory, we divide the evaluation index into five kinds: physiological need index, security need index, social need index, respected need index, self-realization need index.

2.2. Evaluation index of the peasant-workers' current situation

- Physiological need index
Physiological need is the basic requirement to maintain the peasant-workers' own life, including hunger, thirsty, clothing, shelter, sex. If these requirements are not satisfied, the survival of the peasant-workers becomes a problem. In this sense, physiological need is a strong driving force to mobilize the enthusiasm of the peasant-workers. The indexes of physiological need include the level of the wage, housing and food, labor intensity and couple separated.
- Security need index
Security need means that the peasant-workers have the requirement to ensure their safety, prevent their career and property from being lost and avoid the invasion of occupational diseases. At present，construction accidents happen frequently in our country. The rate of the peasant-workers' signing labor contract is relatively low and their social insurance has been marginalized, they also worry about their pension, sickness, and work injury medical [2]. Therefore safety indexes include wage paid in full without delay, safety in production, signing labor contract and social insurance.
- Social need index
Social need includes two parts. Firstly, the need of love, which means the peasant-workers hope the partner-ship can be harmonious. Secondly, the sense of belonging, which means the peasant-workers hope to become a member of the group, and care about each other. Social need indexes are classified as three aspects: harmonious colleagues, family harmony and leisure life.
- Respected need index
Everyone wishes to have a stable social status, and hope that their abilities and achievements can be recognized and respected by the society. Respected need is divided into internal and external respect. Currently, the peasant-workers wish to be respected by the managers and accepted by the urban residents.
- Self-realization need index
This is the highest level of the requirement, which indicates that the peasant-workers try their best to achieve personal goals and aspirations. The indexes of self-realization need include values and future expectation.

3. AHP model of the evaluation index

Analytical Hierarchy Process, AHP for short, proposed by the U.S. specialist of operations research TL.Saaty in the 1970s, which is a multi-objective decision method combined with qualitative analysis and quantitative analysis [3]. Analytical Hierarchy Process makes people's thought process and subjective judgment results hierarchical and quantitative so that uncertainties have been greatly reduced. Applying AHP can solve complex management problems which are difficult to quantify and finally get a satisfying result. Consequently, AHP is a scientific method to confirm the weight [4].

3.1. Establishing AHP structure system

According to the evaluation index system of the management of the peasant-workers above, index system of AHP structure is established as follow in Fig.1.