

***DEVELOPING A JOB SATISFACTION MAP: IMPLEMENTING AHP IN THE FINANCIAL TECHNOLOGY (FINTECH) INDUSTRY ENVIRONMENT***

***MENYUSUN PETA KEPUASAN KERJA: PENERAPAN AHP DI LINGKUNGAN INDUSTRI FINANCIAL TECHNOLOGY (FINTECH)***

**Hafsah Aldrianty, Nidya Dudija<sup>2</sup>**

Fakultas Ekonomi dan Bisnis, Telkom University, Indonesia<sup>1,2</sup>

[hafsahald@student.telkomuniversity.ac.id](mailto:hafsahald@student.telkomuniversity.ac.id)<sup>1</sup>, [nidyaududija@telkomuniversity.ac.id](mailto:nidyadudija@telkomuniversity.ac.id)<sup>2</sup>

**ABSTRAK**

Penelitian ini bertujuan untuk menjawab tiga pertanyaan pokok: pertama, menetapkan kriteria prioritas dalam pemilihan faktor kepuasan kerja; kedua, mengidentifikasi subkriteria prioritas dalam pemilihan faktor kepuasan kerja; dan ketiga, menentukan faktor kepuasan kerja yang paling penting terhadap kepuasan kerja karyawan. Dalam konteks ini, penelitian menggunakan metode Analytic Hierarchy Process (AHP) sebagai alat analisis untuk menyelesaikan masalah pemilihan faktor kepuasan kerja dan membantu perusahaan dalam menentukan kriteria penilaian faktor kepuasan kerja. Tiga kategori kriteria untuk mengukur faktor kepuasan kerja karyawan, yaitu faktor finansial, sosial, dan lingkungan kerja. Setiap kriteria ini memiliki beberapa subkriteria yang relevan dengan pengukuran faktor kepuasan kerja karyawan. Penelitian ini menggunakan metode AHP untuk menganalisis hasil penilaian, dengan mempertimbangkan matriks perbandingan berpasangan. Skala kuantitatif dari 1 hingga 9 digunakan untuk menilai kepentingan relatif setiap unit terhadap unit lainnya. Penelitian ini memfokuskan analisis pada faktor-faktor yang mempengaruhi tingkat kepuasan karyawan, sebuah perusahaan di bidang teknologi informasi. Dalam perbandingan dengan penelitian sebelumnya, pemilihan industri IT memberikan dimensi unik untuk memahami faktor-faktor kepuasan kerja. Dengan melakukan penelitian ini, penulis berharap dapat menyimpulkan dan membandingkan faktor-faktor yang memengaruhi tingkat kepuasan kerja karyawan di perusahaan bidang IT. Kontribusi penelitian ini terletak pada penyediaan pandangan mendalam tentang prioritas dan subprioritas dalam pemilihan faktor kepuasan kerja.

Kata kunci: Analytical Hierarchy Process (AHP), Kepuasan kerja; Kriteria Faktor; Sub Kriteria

**ABSTRACT**

*This study seeks to address three primary inquiries: firstly, to establish priority criteria for selecting job satisfaction factors; secondly, to identify priority sub-criteria in the selection of these factors; and thirdly, to determine the most crucial factors influencing employee job satisfaction. Employing the Analytic Hierarchy Process (AHP) method, the research serves as an analytical tool to resolve the complexities of selecting job satisfaction factors and aids companies in establishing assessment criteria for these factors. The study focuses on three criteria categories—financial, social, and work environment factors—for measuring employee job satisfaction. Each criterion encompasses various relevant sub-criteria for evaluating job satisfaction. Utilizing the AHP method, the research analyzes assessment outcomes with a quantitative scale from 1 to 9, assessing the relative importance of each unit in comparison to others. Concentrating on factors impacting employee satisfaction in the information technology sector, this research offers a unique perspective compared to previous studies. The aim is to conclude and compare the influencing factors on employee job satisfaction levels in IT companies. The study's contribution lies in providing a comprehensive view of priorities and sub-priorities in the selection of job satisfaction factors.*

*Keywords: Analytic Hierarchy Process (AHP); Job satisfaction; Factor Criteria; Sub Criteria*

**INTRODUCTION**

According to research by [1] at the beginning of 2017, banks in the European Union experienced the closure of 9,100 branches and the reduction of more than 40 thousand employees due to changes in customer transaction behavior. Indonesia is

predicted to face a similar situation in the next few years, where the majority of customers will switch from conventional banking services to increasingly maximal digitalization processes. From an external perspective, employees may be concerned about the possibility of being unable to meet customers'

increasingly high expectations for banking services, as well as concerns about lawsuits from third parties due to processing errors. This risk perception can be a source of work stress, which often makes employees resistant to change and ultimately hinders the change process itself. Large workloads and external factors have a significant impact on employee job satisfaction levels. Individuals with high levels of job satisfaction tend to have a positive view of their work, while those with low levels of job satisfaction may feel dissatisfaction [2].

Table 1. 1 IT QA employee resignation data

Year	Number of employees who resigned
2022	2
2023	5

Based on internal company surveys and related industry data, it appears that the number of resignations in the IT QA division in 2023 will increase significantly. This increase is of course a serious concern for company management, because it can have a negative impact on operational continuity and the achievement of the organization's strategic goals. Therefore, an in-depth understanding is needed regarding aspects of employee job satisfaction in the IT QA division which might trigger an increase in the resignation rate. A high level of employee turnover intensity is often used as an early indicator of fundamental problems in a company. High levels of employee turnover can be a sign that employees feel dissatisfied with their jobs. This can make them consider whether to continue working at their current company or look for job opportunities elsewhere that can fulfill their desires [3]. The positive relationship between job satisfaction can create an environment where employees are more likely to keep their jobs and not think about quitting. Factors such as job satisfaction, needs met, and interrelated commitment can form a positive cycle in which job satisfaction and commitment mutually reinforce each other. If employees feel satisfied with their work, they tend to be more engaged and committed to the job, which in turn can increase their job satisfaction [4].

Nowadays WFH is starting to be less and less fully implemented, now the work system has changed to 4 days Work From Office (WFO) in the IT department which makes many considerations for employees also in maintaining the level of satisfaction in their work. Starting from the policy being implemented in April 2023, within a period of 3 months in the IT department there were ten people who applied to resign, seven of whom were dissatisfied with the four-day Work From Office (WFO) work system implemented in the IT department. External factors that can influence employee job satisfaction include changes in the

work environment, such as the work system implemented, initially a hybrid system was implemented (required to come to the office 1 working day) or more commonly known as Work from Home (WFH). which began to be intensively implemented by companies in Indonesia during the Covid-19 pandemic. In research by Limanta et al., (2023) states that Work from Home is a work system where workers can carry out work at home using the applicable system, which was implemented as a result of implementing the policy of implementing restrictions on community activities (PPKM) to reduce the spread of the Covid-19 virus originating from crowds, social interaction. Some of the factors that are most likely related to job satisfaction in the IT QA division involve aspects such as performance management, recognition of contributions, career development opportunities, and balance between workload and resource support. A thorough evaluation of these dynamics is critical, especially because the IT QA division contributes not only to the organization's technology infrastructure, but also to innovation and digital transformation. If co-workers submit their resignations at the same time, this also affects the amount of work load that other co-workers will receive, where physically and mentally they feel increasingly burdened by these additional tasks, which also affects the level of satisfaction with their work. The relationship between organizational commitment, job satisfaction and job performance has been confirmed in many studies [6]. A problem that may arise is low company performance due to continuous employee turnover, which can cause inconsistencies in performance. Apart from that, management also has to pay additional costs to provide severance pay, recruitment costs, advertising and other needs [3].

[7] highlighted that financial aspects are the main focus of management, followed by psychological, social and physical dimensions. Job satisfaction is, in essence, an emotional response to a work situation, influenced by the extent to which work results meet or exceed expectations. Factors such as salary, promotions, supervision, benefits, rewards, regulations, relationships with coworkers, nature of work, and communication have an impact on the level of job satisfaction [8]. Indicators that dominate employee job satisfaction include salary, promotions, benefits and awards. [9] highlights that factors such as job satisfaction, salary, leadership, and the attitude of co-workers have a positive and significant influence on employee performance. Colleagues' attitudes, as an element of job satisfaction, are proven to have a greater dominant impact than other variables on performance. Meanwhile, according to As'ad [10], there are four main factors that influence job satisfaction, namely

psychological factors, social factors, physical factors and financial factors.

1. Psychological Factors:

- a. Interest in Work: Emphasizes the extent to which employees are interested and enthusiastic about their work.
- b. Peace of mind at work: Involves feeling comfortable and at ease in carrying out duties and responsibilities.
- c. Ethics at Work: Relating to morality and ethical values applied in the work environment.
- d. Skills at Work: Concerns the skills and abilities of employees in carrying out their duties.

2. Social Factors:

- a. Working Relationships with Coworkers: The quality of social interactions between fellow employees.
- b. Work Relations with Superiors: Interactions between employees and superiors in the work context.
- c. Employee Relations with the Company: Employee involvement and attachment to the company.
- d. Leadership: Leadership qualities that can influence job satisfaction.

3. Physical Factors:

- a. Type of Work: The nature and characteristics of the work performed.
- b. Job Equipment: The availability and quality of tools and materials used in the job.
- c. Time Management: How time is managed in the context of work.
- d. Work Environment: The physical conditions of the workplace including temperature, lighting, and air exchange.

4. Financial Factors:

- a. Compensation: The system and amount of salary received by employees.
- b. Social Security: Protection and guarantees provided by companies to employees.
- c. Facilities Provided: Availability of facilities that can improve employee welfare.
- d. Promotion: An opportunity to increase job title or responsibility.

By understanding and fulfilling these aspects, it is hoped that we can create working conditions that support and increase employee satisfaction. To overcome this problem, this research aims to identify factors other than the work environment that influence the level of employee job satisfaction at PT Alto Network. It is hoped that this step will help the company to make improvements to increase employee job satisfaction and, in turn, have a positive impact on the entire company.

In assessing job satisfaction factors, several methods are used to facilitate the assessment process. The main contribution of this research is to provide a ranking of factors and interactions between them, which are difficult to measure and approach reality [11]. Evaluation is carried out by assessing the relationship between each criterion and sub-criteria. The AHP method applies pairwise comparisons between criteria and each sub-criterion. The results of this comparison produce a priority vector, which is then multiplied by the priority vector in the criteria and the priority vector in the sub-criteria, producing a global weight for each sub-criterion [12]. There are many studies that have investigated the relationship between job satisfaction and other organizational variables. One study conducted by Kinicki & Fugate [13] revealed that job satisfaction has a significant correlation with attitudes, behavior and results at the organizational level. From these three dimensions, ten main impacts can be identified that correlate with job satisfaction. Job satisfaction has four impacts on the attitudinal dimension, four impacts on the behavioral dimension, and two impacts on the organizational level outcome dimensions.

1. Attitude:

- a. Employee motivation
- b. Employee engagement
- c. Cognitive withdrawal
- d. Perceived stress level

2. Behavior:

- a. Performance
- b. Organizational citizenship behavior
- c. Counterproductive work behavior
- d. Employee turnover rate

3. Organizational level:

- a. Financial performance
- b. Customer satisfaction

Previous studies by Gumilang M., (2018) and Ximenes et al., (2019) have supported the use of AHP in job satisfaction analysis. This research was conducted to understand and increase the level of employee job satisfaction. The author can conclude that companies can use AHP to evaluate performance and help management identify areas that need to be improved or given priority. AHP is useful in situations where a company must allocate limited resources, such as budget or labor, among various projects or activities. This helps increase the efficiency and effectiveness of resource use. By highlighting the problems that arise, the preparation of this research is directed at identifying factors that influence employee job satisfaction. The aim is to provide insight to the company so that it can prioritize improvement efforts that can increase job satisfaction of IT QA division employees. This is expected to help overcome the resignation rate which will increase in 2023.

## RESEARCH METHOD

This research has the main objective of identifying and determining the criteria used in measuring employee job satisfaction factors. The focus is to determine the criteria that have the highest weight and provide a significant influence in measuring employee job satisfaction at PT. Alto Network.

Meanwhile, according to As'ad ([10]), there are four main factors that influence job satisfaction, namely psychological factors, social factors, physical factors and financial factors.

### 1. Psychological Factors:

- a. Interest in Work: Emphasizes the extent to which employees are interested and enthusiastic about their work.
- b. Peace of mind at work: Involves feeling comfortable and at ease in carrying out duties and responsibilities.
- c. Ethics at Work: Relating to morality and ethical values applied in the work environment.
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- d. Promotion: An opportunity to increase job title or responsibility.

## METHOD

The research was conducted within the scope of the IT department at PT Alto Network where the respondents consisted of 3 people who were QA Associate Managers in the IT QA department. In this research, the type of data used in this research uses primary and secondary data.

1. Primary Data: This data is obtained directly from sources, who in this case are respondents or employees of PT. Alto Network. They will provide answers regarding the priority level of criteria in the research.

2. Secondary Data: This data comes from existing information, especially employee profile data recorded at PT. Alto Network. Secondary data provides additional context and supports the analysis in this study.

The steps for data analysis using the Analytic Hierarchy Process (AHP) method according to [14] can be described as follows:

### 1. Data Collection:

- a. Data was collected from various sources, including questionnaires, interviews, and company data.
- b. The data collected is related to the criteria and sub-criteria used in the research.

### 2. Hierarchy Creation:

- a. Creating a hierarchy is done by determining the level of priority and linkages between objectives, criteria, sub-criteria and alternatives.
- b. A hierarchical structure is formed with the first level being the decision objective (Goal), the second level being the criteria, and the third level being the alternatives.

### 3. Comparative Judgment:

- a. Relative assessment is carried out on pairs of elements within a certain level until all related elements are assessed.
- b. Uses a paired comparison scale to determine the relative importance of elements.

### 4. Synthesis of Priorities:

- a. Using the Eigen Vector method to arrange the priorities of each element in the hierarchy.
- b. The local priority is multiplied by the priority of the criteria at the upper level and added together to get the global priority.

### 5. Logical Consistency:

- a. Ensures logical consistency through aggregation of Eigen Vectors from various hierarchical levels.

- b. Achieve a weighted composite vector to ensure consistency and obtain decision-making order.

6. Data Processing with Expert Choice v11: Application of the AHP method using Expert Choice v11 software to simplify the calculation of weights and priorities for each criterion and sub-criteria.

By using AHP, it is hoped that research can provide systematic and measurable results related to employee job satisfaction at PT. Alto Network.

According to [15] decision hierarchy structures can be grouped into two types: complete (complete) and incomplete (incomplete). A decision hierarchy structure is categorized as complete when all parts at one level are related to all parts at the next level. Simply put, no units are missed or disconnected. On the other hand, a decision hierarchy is considered incomplete if there are units that are not related to other elements at the next level.

**RESULTS AND ANALYSIS**

**Respondent Characteristics**

The research was conducted within the scope of the IT department at PT Alto Network where the respondents consisted of 3 people who were QA Associate Managers in the IT QA department.

**Analysis of Research Results**

The first step in using the AHP method is to create a pairwise comparison matrix. This matrix is obtained from the results of a hierarchical weighting questionnaire for the main criteria and sub-criteria.

Analysis of Criteria for Measurement of Employee Job Satisfaction Factors

There are 4 categories of criteria for measuring employee job satisfaction factors, namely psychological, financial, social and physical factors. Each criterion has several sub-criteria related to measuring employee job satisfaction factors.

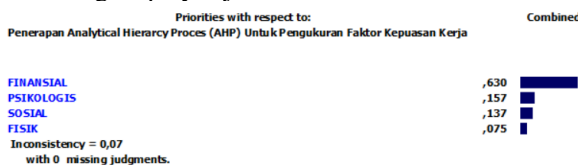


Figure 2 Main Criteria Assessment Weight Results  
Source: Data Processed by the Author (2023)

The results of data processing show that the criteria that has the main priority is Financial with a weight of 0.630. The second criterion is Psychological with a weight of 0.157. The third criterion is Social with a weight of 0.137 and the final priority is given to the Physical criterion with a weight of 0.075. Thus, based on the weight of the respondents' assessments, Financial criteria are

considered the most important criteria with the highest priority.

**Pairwise Comparative Assessment Analysis of All Subcriteria for Measuring Employee Job Satisfaction Factors**

There are 4 categories of criteria for measuring employee job satisfaction factors, namely psychological, financial, social and physical factors. Each criterion has several sub-criteria related to measuring employee job satisfaction factors.

Psychological criteria include 4 sub-criteria, namely interest in work, peace of mind at work, ethics at work and skills at work. The Social criteria have 4 sub-criteria, namely working relationships with colleagues, working relationships with superiors, employee relationships with the company and leadership. Physical criteria have 4 sub-criteria, namely type of work, work equipment, time management and work environment. Financial criteria have 4 sub-criteria, namely Compensation, Social Security, Facilities provided and Promotion.

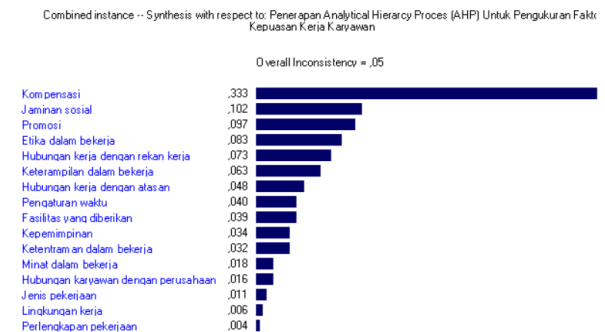


Figure 3 Results of Assessment Weights for All Subcriteria

Source: Data Processed by the Author (2023)

The results of the data processing above, the sub-criteria which is a sub-criterion of the Financial criteria, the Compensation sub-criteria has the first priority, namely with a weight of 0.333 and the Job Equipment sub-criteria is the lowest sub-criterion with a weight of 0.004. The results of the sub-criteria assessment weights carried out by respondents show that compensation has the highest priority among other sub-criteria in all sub-criteria.

**CONCLUSION**

Based on the results of research regarding the Application of the Analytical Hierarchy Process (AHP) for Measuring Employee Job Satisfaction Factors, several conclusions can be drawn: The results of the pairwise comparison calculation show that the Financial criteria have the highest priority, with a weight of 0.630. This means, based on respondents' responses using the Analytical Hierarchy Process (AHP) method, financial aspects are considered the most important factor in

determining employee job satisfaction. With the highest priority on Financial criteria, companies can interpret that respondents emphasize the importance of financial aspects in influencing their job satisfaction. This can be a basis for companies to develop policies that support and improve employee financial aspects, such as salaries, bonuses and other work compensation.

Each criterion has its own sub-criteria and has its own level of priority. Respondents have given their assessments of the sub-criteria and produced the highest and lowest priority levels. In the results of the evaluation carried out by respondents, the sub-criteria with the highest priority level is Compensation, with a weight of 0.333, while the sub-criteria with the lowest priority level is Work Equipment with a weight of 0.004.

The results of the weight calculation show that respondents chose Financial criteria as the highest priority criteria with the highest weight, namely 0.630, and the results of the respondents' assessments show that Physical criteria are the lowest priority criteria, where the level of satisfaction with this criterion needs to be increased further with a weight, namely 0.075 which is considered not to provide good job satisfaction for employees.

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