

## Employee Segmentation for Incentive's Improvement: A Case Study of Plantation Corporation

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### Abstrak

The purpose of the study was to look the employee segmentation for incentive's improvement related to the Job Grade, educational level, working time period and marital status each grade of employee in the Plantation Corporation by 8 Cluster in any job field of operational and supporting person. Respondents in this study were employees of a unit which sampling by 5.876 respondents. The samples in this study were determined using saturated samples, where all the populations in the study were sampled. The results aimed each cluster start cluster 1 to cluster 8 that factors input such like personal data including name, gender, age, educational level, marital status and working time of period has a significant effect on employee incentives by cluster 3 who offer for higher money when off duty and pension money. Simultaneously, working time of period describes that the corporate has a high employee satisfaction when people have been work for average 35 years. Salary, allowance and incentives assists SOEs in scientifically reforming their development and operations, optimizing and innovating their management systems and establishing new paths as a part of human resources development through diversified employee incentives based on the Job Grade, working time period, marital status and educational level for offer a better off duty and pension money. Overall, the result of this research shows that the employee incentives related to the working time period and marital status which directly impact to the Job Grade, instead of the educational level.

**Kata kunci:** Plantation Corporation; Employee Incentives; Plantation Corporation; Marital Status; Working Time Period; Educational Level

### Abstract

Tujuan dari penelitian ini adalah untuk melihat segmentasi karyawan untuk peningkatan insentif terkait dengan Tingkat Pekerjaan, tingkat pendidikan, jangka waktu kerja dan status perkawinan setiap tingkat karyawan di Perusahaan Perkebunan oleh 8 Klaster dalam setiap bidang pekerjaan operasional dan penunjang. Responden dalam penelitian ini adalah karyawan dari satu unit yang diambil sampelnya oleh 5.876 responden. Sampel dalam penelitian ini ditentukan menggunakan sampel jenuh, di mana semua populasi dalam penelitian diambil sampel. Hasil penelitian ditujukan untuk setiap klaster awal klaster 1 hingga klaster 8 yang faktor-faktor input seperti data pribadi termasuk nama, jenis kelamin, usia, tingkat pendidikan, status perkawinan dan waktu kerja periode memiliki pengaruh signifikan terhadap insentif karyawan oleh klaster 3 yang menawarkan uang yang lebih tinggi saat tidak bertugas dan uang pensiun. Secara bersamaan, waktu kerja periode menggambarkan bahwa perusahaan memiliki kepuasan karyawan yang tinggi ketika orang telah bekerja selama rata-rata 35 tahun. Gaji, tunjangan dan insentif membantu BUMN dalam mereformasi pengembangan dan operasi mereka secara ilmiah, mengoptimalkan dan berinovasi sistem manajemen mereka dan membangun jalur baru sebagai bagian dari pengembangan sumber daya manusia melalui diversifikasi insentif karyawan berdasarkan Job Grade, periode waktu kerja, status perkawinan dan tingkat pendidikan untuk menawarkan uang tugas dan pensiun yang lebih baik. Secara keseluruhan, hasil penelitian ini menunjukkan bahwa insentif karyawan terkait dengan jangka waktu kerja dan status perkawinan yang berdampak langsung pada Job Grade, bukan tingkat pendidikan.

**Kata kunci:** Perusahaan Perkebunan; Insentif Karyawan; Perusahaan Perkebunan; Status Perkawinan; Periode Waktu Kerja; Tingkat Pendidikan

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## **INTRODUCTION**

The globalization of the economy has brought significant challenges and opportunities to all corporations, particularly those in the plantation sector, such as Plantation Corporation. This sector plays a vital role in providing raw materials for global industries, with palm oil plantations being one of the largest contributors (World Bank, 2022). As such, the sector's sustainability and competitiveness are essential for long-term success. However, to achieve this, companies must not only optimize their operational efficiency but also focus on human resource management, particularly employee incentive mechanisms (Zhang & Li, 2021).

Globally, many corporations are shifting toward a market-oriented approach to enhance their competitiveness. Governments worldwide are implementing policies to ensure sustainable practices and encourage innovation within industries (International Labour Organization, 2021). Plantation Corporation faces similar challenges and opportunities. It operates both plantation and factory departments and supporting divisions, such as finance, marketing, human resource development, and internal auditing, which are critical for achieving market vitality and competitiveness (Kusuma et al., 2022). However, despite these resources, the organization has struggled with outdated mechanisms for employee incentives, leading to inefficiencies and dissatisfaction (Rahman et al., 2023).

In Indonesia, where palm oil plantations are a critical economic sector, the government has introduced regulations to create sustainable advantages for plantation corporations. These policies aim to promote state-owned enterprises (SOEs) as independent market players with enhanced corporate governance structures (Ministry of Industry, 2022). As a result, introducing social capital and innovative incentive programs has become a priority for Plantation Corporation. These programs are not only intended to leverage state assets but also to foster human resource satisfaction and engagement, thereby improving overall corporate competitiveness (Chen et al., 2022).

Employee satisfaction and performance are strongly influenced by incentives that align with individual characteristics such as education level, marital status, and job grade. Studies have shown that these factors directly impact motivation and productivity (Herzberg, 1968; Guan & Wang, 2020). For example, employees with higher education levels often seek more knowledge-driven roles and incentives tailored to their expertise (Zhou et al., 2019). Similarly, marital status can influence financial needs and job satisfaction, necessitating diverse incentive structures (Lin et al., 2021). Job grade reflects an employee's seniority and responsibilities, which require corresponding recognition and rewards (Chen et al., 2022).

Plantation Corporation's current incentive mechanisms have not fully adapted to the dynamic needs of its workforce. As highlighted by Guan and Wang (2020), organizations must shift from one-size-fits-all approaches to more individualized strategies. The novelty of this study lies in its focus on aligning corporate policies with employee needs based on these key characteristics. The government has also stressed the importance of addressing these gaps through innovative practices to enhance employee engagement (Ministry of Labor, 2022).

Several practical measures, including performance-based bonuses, training opportunities, and flexible work arrangements, have been suggested in previous studies to address these challenges (Zhang & Li, 2021). By incorporating these strategies, Plantation Corporation can improve its human resource management and foster a more competitive corporate culture (Hidayati, 2023). Moreover, such practices align with global sustainability goals, ensuring the long-term viability of the palm oil sector (World Economic Forum, 2022).

This research aims to analyze the impact of education level, marital status, and job grade on employee incentive mechanisms, examine how these factors contribute to

enhancing corporate efficiency and sustainable competitiveness, and provide practical recommendations for state-owned enterprises to transform and upgrade their employee management systems. By addressing these objectives, this study seeks to provide a valuable framework for improving corporate governance and operational efficiency in plantation corporations (Rahman et al., 2023; Zhang & Li, 2021).

## RESEARCH METHOD

In this study, the method used by the authors is quantitative research method, namely a study that takes samples from a population using employees data named **Bezeting Company** as a basic data collection tool (Singarimbun, 1989: 3). Data sources in research are obtained from a unit of Human Resources Department Plantation Corporation as sources Data adjusted to the object of related research,

In conducting this research, the object of the research is a region of Plantation Corporation Plantation Corporation. The population in this study is 5.876 respondents divide to 8 cluster based on the Job Grade, where the sample in this study is using saturated samples which means that all populations are sampled in this study.

## RESULTS AND DISCUSSION

### Research Result of K-Means Clustering

**Table 1. Saturated samples**

Number of Cases in each Cluster		
Cluster	1	1,108
	2	29
	3	32
	4	137
	5	362
	6	3,614
	7	289
	8	305
Valid		5,876
Missing		-

## Cluster 1

**Gender** : Male ( 88,7 %)  
**Marital Status** : K/2 (Married with 2 Children)  
**Education** : SLTA (Senior High School)

**Fix Salary** : Rp. 3.906.322  
**Allowance** : Rp. 975.430  
**Incentives** : Rp. 4.881.752

**Religion** : Islam (87,5 %)  
**Job Grade** : I/C  
**Age** : 50 Years Old  
**Working Time** : 27 Years

### Field Assurance



**Figure 1.** The Persona of Each Cluster

\Cluster 1 shows that most gender was male by 88,7% with the most marital status was K/2 (Married with 2 children), the most educational level was SLTA (Senior High School), The most religion was Islam BY 87,5% , by the rank 3 of low income from all cluster, the most Job grade was I/C for 99,9%,by the age of 50 years old and the working time period for 27 years.

## Cluster 2

**Gender** : Male ( 86,2 %)  
**Marital Status** : K/3 (Married with 3 Children)  
**Education** : SLTA (Senior High School)

**Fix Salary** : Rp. 4.747.304  
**Allowance** : Rp. 1.635.643  
**Incentives** : Rp. 6.382.947

**Religion** : Islam (86 %)  
**Job Grade** : II/D  
**Age** : 54 Years Old  
**Working Time** : 35 Years

### Administration Staff



**Figure 2.** Cluster 2

Cluster 2 shows that most of gender was male by 86,2% with the most marital status was K/3 (Married with 3 children), the most educational level was SLTA (Senior High School), The most religion was Islam BY 86 % , by the rank 2 of High Income from all cluster, the most Job grade was II/D for 100%,by the age of 54 years old and the working time period for 35 years.

### Cluster 3

Gender : Male ( 75 %)  
 Marital Status : K/3 (Married with 3 Children)  
 Education : SLTA (Senior High School)

Fix Salary : Rp. 4.813.554  
 Allowance : Rp. 1.829.842  
 Incentives : Rp. 6.643.395

Religion : Islam (90.5 %)  
 Job Grade : II/D  
 Age : 55 Years Old  
 Working Time : 35 Years

#### Quality Control



Figure 3. Cluster 3

Cluster 3 shows that most of gender was male by 75% with the most marital status was K/3 (Married with 3 children), the most educational level was SLTA (Senior High School), The most religion was Islam by 90,6% , The Highest income from all cluster, the most Job grade was II/D for 100%, by the age of 55 years old and the working time period for almost 35 years.

### Cluster 4

Gender : Male ( 86,9 %)  
 Marital Status : L/0 (Single)  
 Education : SLTA (Senior High School)

Fix Salary : Rp. 3.234.859  
 Allowance : Rp. 773.705  
 Incentives : Rp. 4.008.564

Religion : Islam (86,9 %)  
 Job Grade : I/A  
 Age : 36 Years Old  
 Working Time : 10 Years

#### Harvester



Figure 4. Cluster 4

Cluster 4 shows that most of gender was male by 86,9% with the most marital status was L/0 (Single), the most educational level was SLTA (Senior High School), The most religion was Islam BY 86,9% , The lowest income from all cluster, the most Job grade was I/A as the lowest Job Grade by 94,2%, by the youngest age of 36 years old and the shortest of working time period for 10 years..

## Cluster 5

Gender : 90,9 %  
 Marital Status : K/2 (Married With 2 Children)  
 Education : SLTA (Senior High School)

Fix Salary : Rp. 4.152.350  
 Allowance : Rp. 1.177.325  
 Incentives : Rp. 5.329.676

Religion : Islam (85,9 %)  
 Job Grade : I/D  
 Age : 52 Years Old  
 Working Time : 29 Years

### Factory Employee



**Figure 5.** Cluster 5

Cluster 2 shows that most of gender was male by 90,9% with the most marital status was K/2 (Married with 2 children), the most educational level was SLTA (Senior High School), The most religion was Islam by 85,9% , The moderate income from all cluster, the most Job grade was I/D for 100%, by the age of 52 years old and the working time period for 29 years.

## Cluster 6

Gender : 61,5 %  
 Marital Status : K/2 (Married With 2 Children)  
 Education : SD (Elementary School)

Fix Salary : Rp. 3.625.038  
 Allowance : Rp. 874.574  
 Incentives : Rp. 4.499.612

Religion : Islam (91,5 %)  
 Job Grade : I/B  
 Age : 50 Years Old  
 Working Time : 27 Years

### Foreman



**Figure 6.** Cluster 6

Cluster 2 shows that most of gender was male by 61,5% with the most marital status was K/2 (Married with 2 children), the most educational level was SD (Elementary School), The most religion was Islam BY 91,5% , by the rank 2 of low income from all cluster, the most Job grade was I/B for 99,1%,by the age of 50 years old and the working time period for 27 years.

## Cluster 7

Gender : 91 %  
Marital Status : K/3 (Married With 3 Children)  
Education : SLTA (Senior High School)

Fix Salary : Rp. 4.363.775  
Allowance : Rp. 1.362.073  
Incentives : Rp. 5.725.849

Religion : Islam (80,6 %)  
Job Grade : II/A  
Age : 53 Years Old  
Working Time : 31 Years

### Factory - Foreman

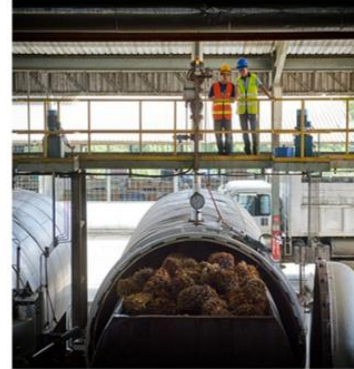


Figure 7. Cluster 7

Cluster 2 shows that most of gender was male by 91% with the most marital status was K/3 (Married with 3 children), the most educational level was SLTA (Senior High School), The most religion was Islam BY 80,6% , by the moderate income from all cluster, the most Job grade was II/A for 99,7%,by the age of 53 years old and the working time period for 31 years.

## Cluster 8

Gender : 90,8 %  
Marital Status : K/3 (Married With 3 Children)  
Education : SLTA (Senior High School)

Fix Salary : Rp. 4.570.055  
Allowance : Rp. 1.464.555  
Incentives : Rp. 6.034.610

Religion : Islam (85,6 %)  
Job Grade : II/C  
Age : 55 Years Old  
Working Time : 34 Years

### Sortation - Foreman



Figure 8. Cluster 8

Cluster 2 shows that most of gender was male by 90,8% with the most marital status was K/3 (Married with 3 children), the most educational level was SLTA (Senior High School), The most religion was Islam BY 85,6% , The moderate income from all cluster, the most Job grade was II/C for 67,9%,by the age of 55 years old and the working time period for 34 years..

## **CONCLUSION**

Based on previous research and the practical situation about employees incentives based on the employee's grade as the impact of the educational level and marital status in case study in a unit of Plantation Corporation by 5.876 respondents divide to 8 clusters, this article explores the cluster who would give the offer of higher off duty and pension money based on incentive mechanisms for employees related to the employee's Job Grade how long the time period that they have worked and the marital status which impacting to the incentives. The long they have been worked and the high marital status impact to the high incentives that would be offer for higher off duty and pension money later. By improving incentives, performance reward systems and development enhancement, it is possible to fully mobilize employees' enthusiasm and creativity, enhance the core competitiveness of the company, and promote the long-term and sustainable development of State-Owned Enterprises Plantation Corporation. Finally, the Cluster 3 – Quality Control Foreman who worked at the Laboratory would get the offer for the off duty of Compensation and more pension money related to their Income consist of Fix Salary, Allowance and Incentives such the highest Grade From all cluster and the company should also establish a complete reward management system and conduct regular performance evaluations to enable continuous learning and growth for corporate sustainability.

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