

# Determining Bonus in Enterprise Resource Planning At Human Resource Management Module Using Key Performance Indicator.

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**Abstract**—Bonus is a reward from company for an employee who gave the best work to the company. Reward is important to get the employee's loyalty. Basically employee want to be appreciate what they do and Company want employee's loyalty. There must be 'win win' solution between them. Then this paper explain how to determine bonus in Enterprose Resource Planning at Human Resource Management module based Key Performance Indicator on. There are several ways to determine bonus. the bonus is determined by how long the employee has worked at the company. It makes some disadvantages for the company, it caused no efficient human resource. The company has to give them a bonus based on years of service, not experience and skill. There is no guarantee if an employee has more years of service, then more profit the company gained. Furthermore, it can impact customer loyalty.

This paper describes how to determine bonus by calculating the weight and analyze KPI (Key Performance Indicator) weight. KPI has SMART criteria, such as Specific, Measurable, Achievable, Relevant, Time-bound. Analysis result can be used for determining bonus by company.

Based on KPI can change the company culture. A company can use human resource efficiently. This way is the 'win win' solution what a company needs. KPI use SMART (Specific, Measurable, Achievable, Relevant, Time-bound) method to determine their indicator in order to be answered. Using KPI will build performance-based culture in the company. This culture will increase human resource efficiency and also company profit.

**Keywords**—KPI, Bonus, SMART.

## I. INTRODUCTION

Basically, human resource management is needed by a company. The company has to keep and encourage human resource to get their maximal profit and resource use efficiently. The company can take several ways to get it, one of them is giving reward to employees. The Employee will be happy if they get rewards. The old way to determine bonus as a reward is total years of service of employees. Sometimes the company gets confused to determine bonus. Because the old way only made employee to be not productive [11][12].

KPI (Key Performance Indicator) is a system that used for supporting the company to determine and measure achievement against company goals. Determining the KPI, there is familiar

method, SMART (Specific, Measurable, Achievable, Relevant, Time-bound) [1], that can list the detail what have to do to achieve the goal. Not only listing, but also evaluating. The KPI is a very useful platform. SMART method is also can be proven.

Seniority-based is the old way to determine bonus. Most Companies are changing to performance-based to determine bonus. Using KPI has several advantages: tracked target, easy evaluating, and responsible. Unlike seniority-based, they can't be tracked or answered[2][3].

## II. METHODS

### A. KPI DESIGN

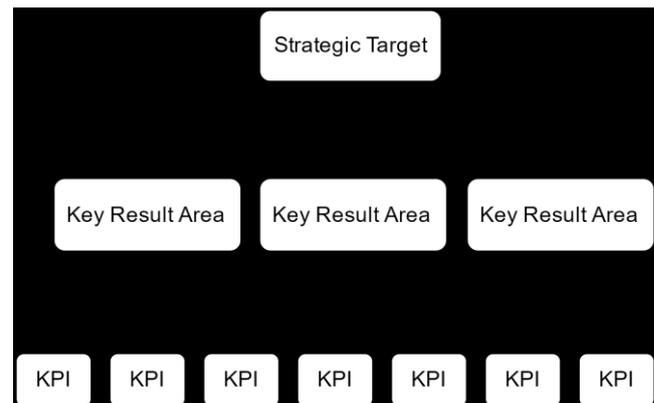


Figure 1. KPI Design

## B. WORKFLOW PROCESS

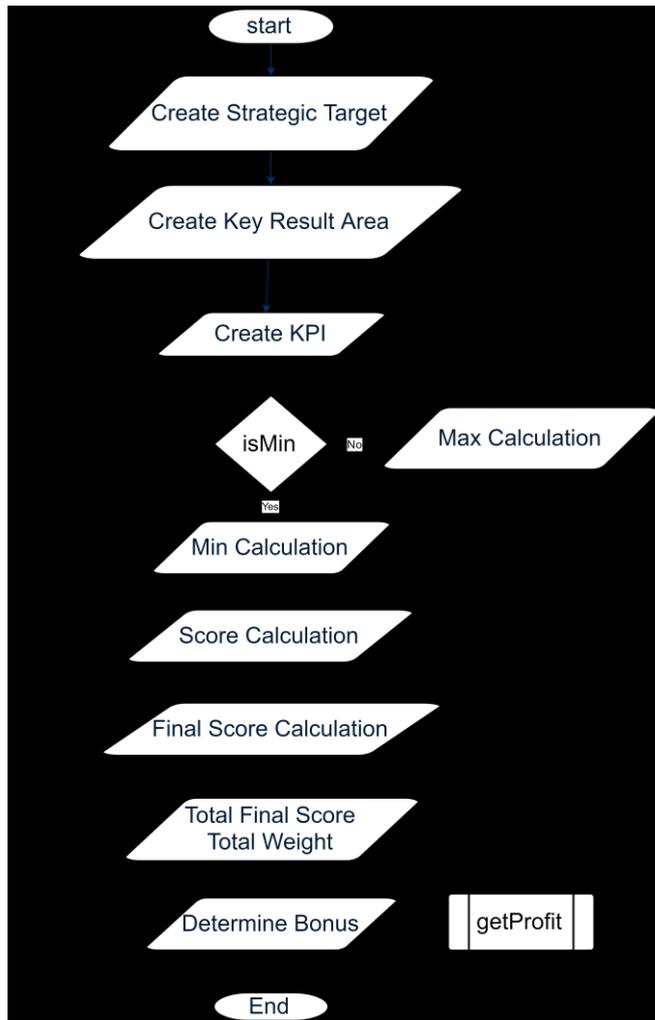


Figure 2 Workflow process

## C. ATTRIBUTES

### a. Strategic Target

Strategic target is consist of person in charge, due date, strategic target name, and detail to describe strategic target [4].

### b. Key Result Area

Key Result Area is describe what area that support Strategic Target. It consists of key result area name and strategic target as parent [4].

### c. Key Performance Indicator

- KPI Detail  
KPI detail has to use SMART method to describe what KPI is.
- Weight  
Every KPI detail has weight, total weight in one Strategic Target is 100.
- Target  
Target is a number that want to achieve.
- Realization  
An actual number.

- Score
- Final Score
- Type (min, max)

## III. KEY PERFORMANCE INDICATOR

### A. KPI (Key Performance Indicator)

KPI is a system which is used for supporting a company or organization to determine and measure achievement against the goal. Targeting a goal with KPI has several advantages, it has SMART criteria to make an KPI. SMART is Specific, Measurable, Achievable, Relevant, Time-bound[4].

### B. SMART

- Specific

It means the goal must be clear, not in general. And also not ambiguous. The company has to deliver thir goal to employee clearly and exactly. Thats why it is so important [2]

- Measurable

When the goal has been clear or specific. Now the progress has to measurable. It is good to make employee still on the track. Employee still on the line to achieve the goal. [2]

- Achievable

The opportunities can be stated to achieve their goal. [2]

- Relevant

Relevant, relevant between goal and company resource. A goal must support with other goal. [2]

- Time-bound

A goal must be followed by a time that state the end of a goal. [2]

### C. Calculation

1. Calculate Score depend on type of KPI, min or max.

Min calculation:

$$\text{Score}(\min) = \frac{\text{Target}}{\text{Realization}} \times 100 \quad (1.1)$$

Max calculation:

$$\text{Score}(\max) = \frac{\text{Realization}}{\text{Target}} \times 100 \quad (1.2)$$

2. Calculate Final Score.

Variable: Weight, Target, Realization, Score, Final Score.

$$\text{Final Score} = \text{Score} \times \text{Weight} \frac{1}{100} \quad (2)$$

3. Sum the Total Final Score in one Strategic Target.

$$\text{Total Final Score} = \Delta \text{Final Score} \quad (3)$$

$$\text{Total Weight} = \Delta \text{Weight} \quad (4)$$

4. Get net profit of Company.
5. Analyze the data will be shown:

**Table 1 Weight and Final**

KPI	Weight	Final Score
% number of employee needs that accomplish on time (< 10 days) (a)	15	14
The average score of the evaluation of new employees after 3 months. (b)	15	15
Number of training hours per employee ( per capita ) per year (c)	10	9
ROI of training for the selected training program (d)	10	9
% the number of employees to top level supervisor who has compiled individual KPI (e)	10	11
% the number of managers who have made performance coaching on a regular basis (once a month) (f)	15	13
Great employee turnover (employee identified as " star") (g)	15	10
Revenue per employee (h)	10	11

6. Set the options to determine bonus. **R1** = 30%, **R2** = 20%, **R3** = 10%. 30% is maximal value to allocate bonus [5].

**Table 2 group bonus after calculate KPI**

Group	Bonus	Total Final Score
R1	30 %	85 - 100
R2	20 %	70 - 84
R3	10 %	55 - 69

#### IV. RESULT AND IMPLEMENTATION

After getting concepts and methods about determine bonus based on KPI (Key Performance Indicator). This is time to implement concept and method to the Human Resource Management Module. This concept and methods are very easy to implement but not really to use it if do not know the concepts.

At Figure 3 until Figure 5 are shown the user interface of application in Human Resource Management Module. Those Figure are about how to create KPI.

#### Strategic Target Code

#### Employee ID

#### Strategic Target Name

#### Period

#### Strategic Target Detail

**Figure 3 Strategic Target**

At Figure 3 is a form of the strategic target. It could be a big goal that company want. Strategic target also can be small goal or individu goal in a company or organization.

#### Strategic Target ID

#### Key Result Area

**Figure 4 Key Result Area**

At figure 4 is a key result area form. This form has strategic target id as parent.

**Key Result Area ID**

Choose Hrm key result area

**Kpi Detail**

**Weight**

Weight

**Target**

Target

**Realisasi**

Realisasi

**Type**

Create

**Figure 5 Key Performance Indicator**

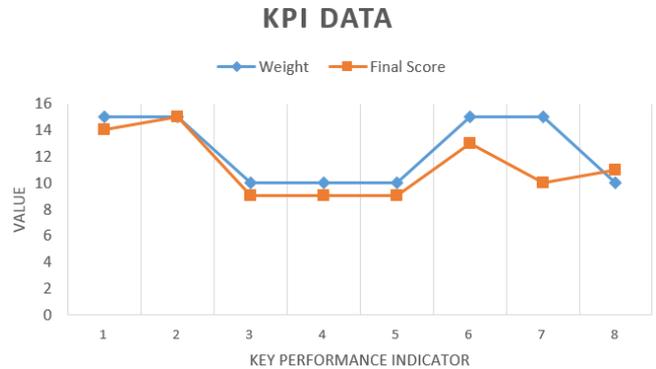
At figure 5 is the main form. Because it is KPI form that will be calculated.

**Table 3 Total Final Score and Weight**

KPI	Weight	Final Score
% number of employee needs that accomplish on time (< 10 days)	15	14
The average score of the evaluation of new employees after 3 months.	15	15
Number of training hours per employee ( per capita ) per year	10	9
ROI of training for the selected training program	10	9
% the number of employees to top level supervisor who has compiled individual KPI	10	11
% the number of managers who have made performance coaching on a regular basis (once a month)	15	13
Great employee turnover (employee identified as " star")	15	10
Revenue per employee	10	11
<b>TOTAL</b>	<b>100</b>	<b>92</b>

After getting Total Final Score. Now the company can determine bonus using some rule according the company. There is standard how many percentage bonus against net profit.

At table 2, the table state the bonus that the company used. Furthermore, the analyzing can get from table 3. It can be shown like this to analyze:



**Figure 6 KPI Data**

At Figure 6, graphic shows how far the KPI run. The company can observe the achievement by KPI. The company also know which KPI that have minus value or zero. This graphic shows the detail of strategic target [6].



**Figure 7 Total Final Score**

At Figure 7, progress bar shows total final score that has update. The progress bar can tell the realization to the company. It is very useful for the company to know how far the KPI run. It also can tell progress of KPI.

## V. EVALUATION

According to result and implementation above. The company has to pay more to the employee who has more years of service. Even though the company has no more budget bonus. The company is confused to determine bonus if there is no KPI. And also, the company has to pay more, if the company applied seniority-based to determine bonus.

In this research, KPI is a top-down system and it is like a tree that has a weight and probability. It should be a correlation between them. And it also can determine bonus accurately by using them.

In Fig 8. Sum of Weight is 100. Then it divides to n branch. Then divides again. The value of each branch is the weight of every KPI[7].

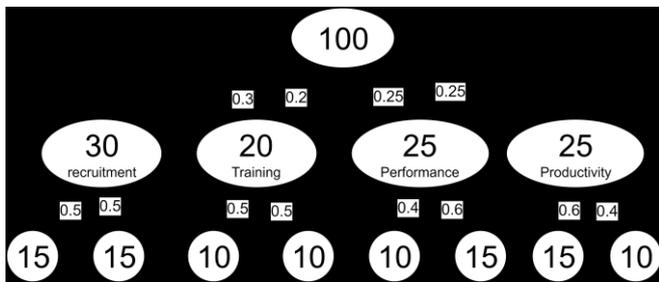


Figure 8 KPI tree and probability

Determining bonus we can use formula:  
 $Bonus = (TFS - (100 - PB)) \times \text{profit}$

TFS = Total Final Score  
 PB = Percentage Bonus Max

If TFS – PB is negative value, then employee did not achieve what the company goal.

Table 4 Bonus in 4 companies with different profit

Company	Total Final Score	Percentage Bonus Max	profit	Bonus
Company A	92	70	104.331.952.542	22.953.029.559
Company B	60	70	73.322.581.853	0
Company C	80	70	96.620.176.306	9.662.017.631
Company D	80	70	90.909.341.477	9.090.934.148

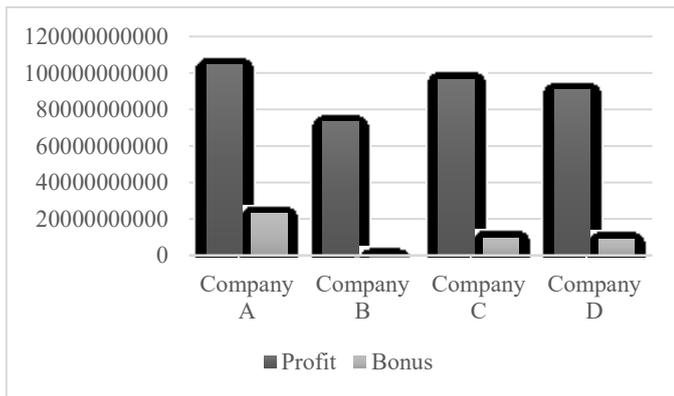


Figure 9 Profit and Bonus 4 companies

## VI. CONCLUSION

Determining bonus depends on KPI is more efficient than seniority-based. Bonus amount given to the employee is fair, the company gets what they want. It is more profit. And the employee will get more bonus if they can achieve the KPI goal [9][13][14].

Using KPI to determine bonus is a good idea and choice for the company. They will never regret to give them bonus until 30% of profit. Because the company also gets the employee's loyalty and motivation.

Number of bonus following amount of performance issued by human resource. In this case we calculate from KPI. KPI has more efficient than all of bonus is divided to all employee. Moreover, in KPI is controlled by number of weight [8][10].

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