DECISION SUPPORT SYSTEMS WITH PROFILE MATCHING METHOD IN SELECTION OF ACHIEVEMENT MARKETING OFFICER AT BRI KATAMSO YOGYAKARTA

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Abstract

Appreciating outstanding employee by providing reward and recognition is a method to enhance the turnover of the company as well as to motivate the employee's performance of employees. BRI Katamso constantly encourages the Marketing Officer (MO) to maintain and extent the achievement of targets and performance in order to increase the company's turnover. Pursuing augmentation in turnover and deterioration in MO, BRI has led the ability of MO to be represented to the public. The assessment criteria are set as the MO achievement including: outstanding credit, non-performance loan, Britama achievement, Simpedes attainment, current accounts achievement, deposits achievement, the sum of all achievement, debtors, creditors, the establishment of a blacklist and inclusion on the blacklist. Marketing officers are, in fact, distributed in each BRI Branch Office and numbers of BRI Unit and *BRI Teras*. With the Decision Support System (DSS), it is expected that the computerization system would objectively and precisely assess the MO's performances. The purpose of this research was to develop SPK in BRI Katamso by applying Profile Matching method.

Keywords: *DSS, Marketing Officer, Profile Matching, BRI Katamso*

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1. Introduction

PT. Bank Rakyat Indonesia (BRI) is a state-owned bank with its vision "To become a leading commercial bank which always puts priority on customer satisfaction". In addition, the missions include: 1) To carry out the best banking activities by putting priority on service to micro-, small- and medium enterprises in order to support the economy of the community, 2) To provide prime service to customers through a widespread network which is supported by professional human resources by implementing the good corporate governance practice, 3) To provide the optimum profit and benefit to stakeholders [1] [2].

BRI Katamso constantly encourages the Marketing Officer (MO) to maintain and extent the achievement of targets and performance in order to increase the company's turnover. Marketing Officer is the task of providing credit by using analysis of character, capacity, capital, collateral, condition of economy to customers. The increase in turnover and deterioration in BRI Katamso is spearheading the ability Marketing Officer (MO) in BRI represents to society. MO several assessment criteria: outstanding credit, non-performance loan, the amount Britama achievement, Simpedes attainment, the achievement of current accounts, deposits achievement number, the sum of all achievement, debtors, creditors, the establishment of a blacklist and inclusion on the blacklist.

With the number of MO are quite numerous and scattered at Branch Offices, Units or Teras BRI, the problems often encountered in the assessment of MO is the difficulty of the assessment process MO who excel at BRI in a simple way and find the assessment manual of documents which is pretty much as it would foreclose time and less effective in the performance appraisal process. Each month, the performance of MO ability is monitored as the turnover of the company spearheading MO. The results obtained when using the same method will not be transparent, and tends to subjectivity and the closeness of the relationship of leadership. As a result, the decision to create a less precise and not the implementation of good corporate governance practices. Otherwise it will not fulfill the needs of the company based on the competencies required. Expected Decision Support System (DSS), which computerized the expected errors due to human error and subjectivity in decision making can be reduced. [3] [6-7]

Profile matching method helps in providing the rankings, where the ranking is very easy to determine achievement Marketing Officer according to criteria - established criteria. Determination of criteria appropriate to the two methods are needed to prevent errors and fraud by certain parties [3] [4] [8-12] [13-22]

2. Decision Support System (DSS)

According to Turban Decision Support System (DSS) is generally defined as a system capable of providing problem-solving ability and ability pemgkomunikasian for semi-structured problems. In particular, SPK is defined as a system that supports the work of a manager or group of managers in solving the problem of semi-structured way of providing information or specific proposals leading to the decision [5] [20-22].

Determination of marketing decision support system officer will be designed as follows:

a) Identify the need for data that will serve as the master data can be used for the needs of the System

b) For the base model will be creating a data model SPK marketing officer in accordance with the needs of the system.

c) Designing modules that can be used for software interfaces of the decision support system of determining a candidate achievement.

For more details, sequence of steps to be made as shown in Figure 1 the DSS model of the system as follows:
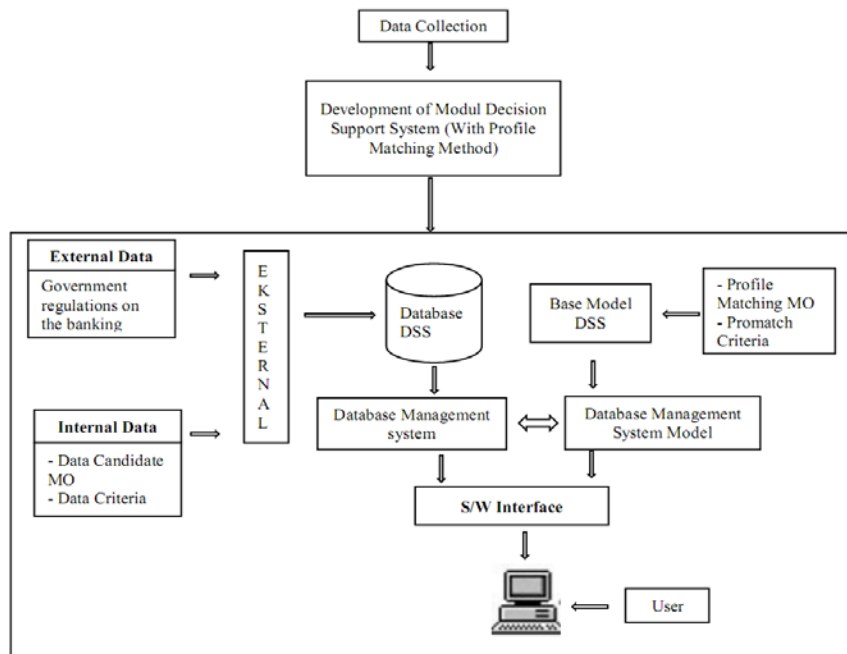
Figure 1. Model DSS Marketing Officer

3. Marketing Officer Selection

The company has always set criteria / indicators What are the assessment in a otherwise the company do excel. Here are some of the criteria in the assessment of Achievement Marketing Officer at Bank BRI Yogyakarta Katamso: Indicator 1: outstanding credit, Indicator 2: non-performing loans, Indicator 3: number of achievement Britama, Indicator 4: number of achievement Simpedes, Indicator 5: number of current accounts achievement, Indicator 6: number of deposits attainment, Indicator 7: number of whole achievement, Indicator 8: debtor, Indicator 9: creditors, Indicator 10: establishment of a blacklist

Table 2. Table of Assestment Marketing Officer

No	Description	The value in the Word	The value in The Percentage
1	Less has an interest to observe the environment, knowledge is less developed. Not successfully represents products, selling products and introduce the company to the public.	Much less	Achievement Percentage 0-25%
2	Has an interest to observe the environment, knowledge is less developed. Less successfully represents products, selling products and introduce the company to the public.	Less	Percent Achievement 26-50%
3	Has an interest to observe the environment, knowledge sufficiently developed. Less successfully represents products, selling products and introduce the company to the public.	Fair	Percent Achievement 51-75%
4	Have sufficient insight and networking, the salient achievements. Able to represent the product, selling a product and introduce the company to the public.	Good	Percent Achievement 76- 100%
5	Having a good insight and networking, the salient achievements. Able to represent the product, selling a product and introduce the company to the public.	Excellent	Percent Achievement of > 100%

4. Profile Matching Method

Profile matching method is a method in solving the problems by providing a rank of the best candidate of the criteria that have been mapped. [4] [5-7] [25-26]

A. Mapping Competency Gap

Gap: the difference / difference value of each aspect / attribute with a target value.

Gap = Value Attribut – Value Target   …(1)

Example: Calculating Gap Position in a company: **Gap = Profil Employee– Profil Position**

B. Weighting

Having obtained the Gap on each individual, each individual profile is weighted in accordance with the values in Table Weight Value Gap.

Table 2. Table Weight Value Gap.

No	Difference	weight	Description
1	0	5	no difference
2	1	4,5	individual competencies excess 1 level
3	-1	4	individual competencies shortage 1 level
4	2	3,5	individual competencies excess 2 level
5	-2	3	individual competencies shortage 2 level
6	3	2,5	individual competencies excess 3 level
7	-3	2	individual competencies shortage 3 level
8	4	1,5	individual competencies excess 4 level
9	-4	1	individual competencies shortage 4 level

C. Calculation And Grouping Core & Secondary Factor

Core Factor calculations using the formula shown below:

$$NCF = \frac{\Sigma NC}{\Sigma IC} \qquad NSF = \frac{\Sigma NS}{\Sigma IS}$$ ….(2)

Description :

NFC   : The average value of core factor

NC (i, s, p)   : The total number of core values factor (intelligence, work Attitude, Behavior)

IC   : Number of items cores factor

NSF   : The average value of secondary factor

NS (i, s, p)   : Total value of total secondary factor (intelligence, work attitude, behavior)

IS   : Number of items secondary factor

D. Calculation of the total value

Every aspect of the calculation of the above, the following is calculated based on a percentage of the total value of the core factors and secondary factors that are expected to affect the performance of each profile. Examples tiap- each calculation can be seen in the formula below:

$$(x)\%NCF(i,s,p) + (x)\% NSF(i,s,p) = N(i,s,p)$$ ...(4)

Description   :

NCF (i, s, p)   : The average value of core factor (Intelligence, Attitude, Behavior)

NSF (i, s, p)   : Average secondary factor

                   (Intelligence, Attitude, Behavior)

N (i, s, p)   : The total value of the aspects (Intelligence, Attitude, Behavior)

(x)%   : The percent entered [4] [5-7] [25-26].

E. Calculation Ranking

The end result of the profile matching is the ranking of the candidates. Determination ranking refers to certain calculations. Calculation results can be sorted purposively by the following formula [4] [5-7] [25-26]:

$$\text{Ranking} = (x)\%.Ni + (x)\%.Ns + (x)\%.Np \qquad \ldots(5)$$

Description :

Ni   : Value intelligence

Ns   : Value Work Attitude

Np   : Value Behavior

(x)%   : Percent Value is entered

5. Modelling With Unified Model Language

A. Designing Use Case
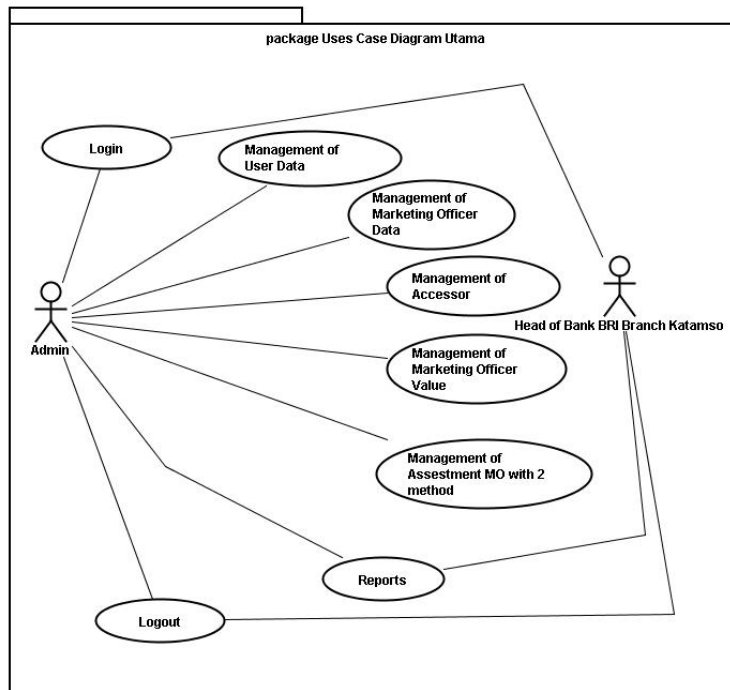
The following design Use Case Diagram of the system:

Figure 2. Use Case Selection SPK MO Achievement

Picture above described two actors namely admin, Head of Branch Office. Admin serves as administrator of the Candidate Selection Decision Support System Achievement of them regulate the management section, login user management, user data management, data management appraiser, appraisal management provisions (criteria), management's assessment of MO achievement and do all that is in the system without restrictions. Branch Head (Offices) serves as the user from Selection Decision Support System Marketing Officer Achievement of them see the report of the system.

B. Design Activity Diagram

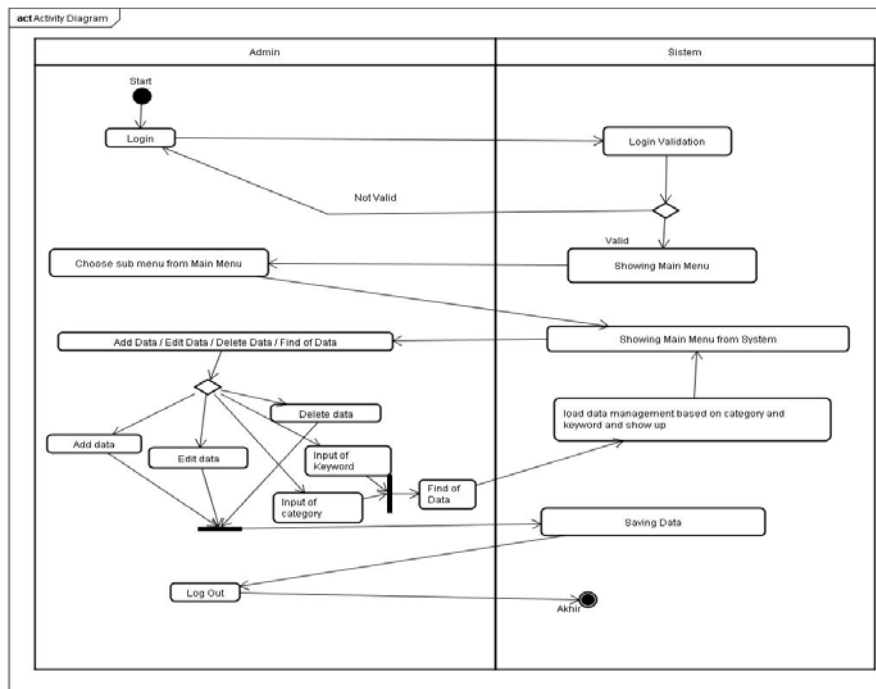The following design Activity Diagram of the system:

Figure 3. Diagram SPK Activity Selection MO Achievement

In the picture showed activity Admin groove for data management assessment Achievement MO. Admin to login and the system responds by validating Login to match. After login, the system shows the main menu to the admin, subsequently, selects the menu Achievement MO assessment data management. Admin will add data, change data, delete data, search data and the system will save the data changes. After completing it, the administrators have to log out.

6. Implementation

Here are the data values Marketing Officer BRI based on the achievement of each variable to be the implementation profile matching and Promethee method:

Table 3. Tabel Value MO BRI

No	Name	Value Indicators / Criteria										
		1	2	3	4	5	6	7	8	9	10	11
1	A	5	4	4	4	4	5	5	5	5	5	5
2	B	5	4	4	4	4	4	5	5	5	5	5
3	C	5	4	4	4	4	4	4	5	5	5	5
4	D	5	4	4	4	4	4	4	4	5	5	5
5	E	5	4	4	4	4	4	4	4	4	5	5
6	F	5	4	4	5	5	5	5	5	5	5	5
7	G	5	4	4	4	4	4	4	4	4	4	4
8	H	5	3	4	4	4	4	4	4	4	4	4
9	I	5	3	3	4	4	4	4	4	4	4	4
10	J	5	4	4	4	5	5	5	5	5	5	5
11	K	5	3	3	3	4	4	4	4	4	4	4
12	L	5	5	5	5	5	5	5	5	5	5	5

13	M	5	4	4	4	4	4	4	4	4	4	5
14	N	5	3	3	3	3	4	4	4	4	4	4
15	O	5	3	3	3	3	3	4	4	4	4	4

Description : Indicator 1: outstanding credit, Indicator 2: non-performing loans, Indicator 3: number of achievement Britama, Indicator 4: number of achievement Simpedes, Indicator 5: number of current accounts achievement, Indicator 6: number of deposits attainment, Indicator 7: number of whole achievement, Indicator 8: debtor, Indicator 9: creditors, Indicator 10: establishment of a blacklist, Indicator 11: income black list, Value 1: Much less (Achievement Percentage 0-25%), Value 2: Less (Percent Achievement 26-50%), Value 3: Fair (Percent Achievement 51-75%), Value 4: Good (Percent Achievement 76- 100%), Value5: Excellent (Percent Achievement of > 100%)

6.1 Implementation Profile Matching Method

A. Mapping Competency Gap

Here are the results of the competency gap mapping criteria defined on each MO:

Table 4. Results of GAP Competence

Indicator		1	2	3	4	5	6	7	8	9	10	11
Profil Position		5	5	3	4	5	3	4	5	5	4	3
No	Name	Competency mapping GAP										
1	A	0	0	1	0	-1	0	0	3	0	0	0
2	B	0	0	1	0	-1	-1	0	3	0	0	0
3	C	0	0	1	0	-1	-1	-1	3	0	0	0
4	D	0	0	1	0	-1	-1	-1	2	0	0	0
5	E	0	0	1	0	-1	-1	-1	2	-1	0	0
6	F	0	0	1	1	0	0	0	3	0	0	0
7	G	0	0	1	0	-1	-1	-1	2	-1	-1	-1
8	H	0	-1	1	0	-1	-1	-1	2	-1	-1	-1
9	I	0	-1	0	0	-1	-1	-1	2	-1	-1	-1
10	J	0	0	1	0	0	0	0	3	0	0	0
11	K	0	-1	0	-1	-1	-1	-1	2	-1	-1	-1
12	L	0	1	2	1	0	0	0	3	0	0	0
13	M	0	0	1	0	-1	-1	-1	2	-1	-1	0
14	N	0	-1	0	-1	-2	-1	-1	2	-1	-1	-1
15	O	0	-1	0	-1	-2	-2	-1	2	-1	-1	-1

B. Weighting, Calculation And Grouping Core and Secondary Factor

Following the results of the mapping gap competence weighting assigned to each - each MO. Before the calculation of the percentage in each core and secondary -masing election criteria into core and secondary factor in the selection of MO achievement. For a core factor in: 1 (outstanding credit), 2 (non-performance loan), 4 (the number of achievement Simpedes), 6 (number attainment of deposits), 10 (formation of black list), 11 (income black list) and a secondary factor in: 3 (the number of achievement BritAma), 5 (the number of current accounts achievement), 7 (the sum of all achievement), 8 (debtor), 9 (creditors). After the selection criteria for the core and secondary factor in the selection of achievement MO, percentage on each core and secondary and final results and ranking was conducted.

Table 5. Table Weighting, *Core* and *Secondary Factor*

No	Name	1	2	3	4	5	6	7	8	9	10	11	Core	Secondary	60% Core	40% Secondary	Final Result	Ranking
1	A	5	5	4,5	5	4	5	5	2,5	5	5	5	5	4,2	3	1,68	4,68	3
2	B	5	5	4,5	5	4	4	5	2,5	5	5	5	4,833	4,2	2,9	1,68	4,58	4
3	C	5	5	4,5	5	4	4	4	2,5	5	5	5	4,833	4	2,9	1,6	4,5	7
4	D	5	5	4,5	5	4	4	4	3,5	5	5	5	4,833	4,2	2,9	1,68	4,58	4
5	E	5	5	4,5	5	4	4	4	3,5	4	5	5	4,833	4	2,9	1,6	4,5	7
6	F	5	5	4,5	4,5	5	5	5	2,5	5	5	5	4,917	4,4	2,95	1,76	4,71	2
7	G	5	5	4,5	5	4	4	4	3,5	4	4	4	4,5	4	2,7	1,6	4,3	10
8	H	5	4	4,5	5	4	4	4	3,5	4	4	4	4,333	4	2,6	1,6	4,2	12
9	I	5	4	5	5	4	4	4	3,5	4	4	4	4,333	4,1	2,6	1,64	4,24	11
10	J	5	5	4,5	5	5	5	5	2,5	5	5	5	5	4,4	3	1,76	4,76	1
11	K	5	4	5	4	4	4	4	3,5	4	4	4	4,167	4,1	2,5	1,64	4,14	13
12	L	5	4,5	3,5	4,5	5	5	5	2,5	5	5	5	4,833	4,2	2,9	1,68	4,58	4
13	M	5	5	4,5	5	4	4	4	3,5	4	4	5	4,667	4	2,8	1,6	4,4	9
14	N	5	4	5	4	3	4	4	3,5	4	4	4	4,167	3,9	2,5	1,56	4,06	14
15	O	5	4	5	4	3	3	4	3,5	4	4	4	4	3,9	2,4	1,56	3,96	15

After ranking is obtained, the next step is to design a decision support system. The following display Selection Decision Support System Development Marketing:
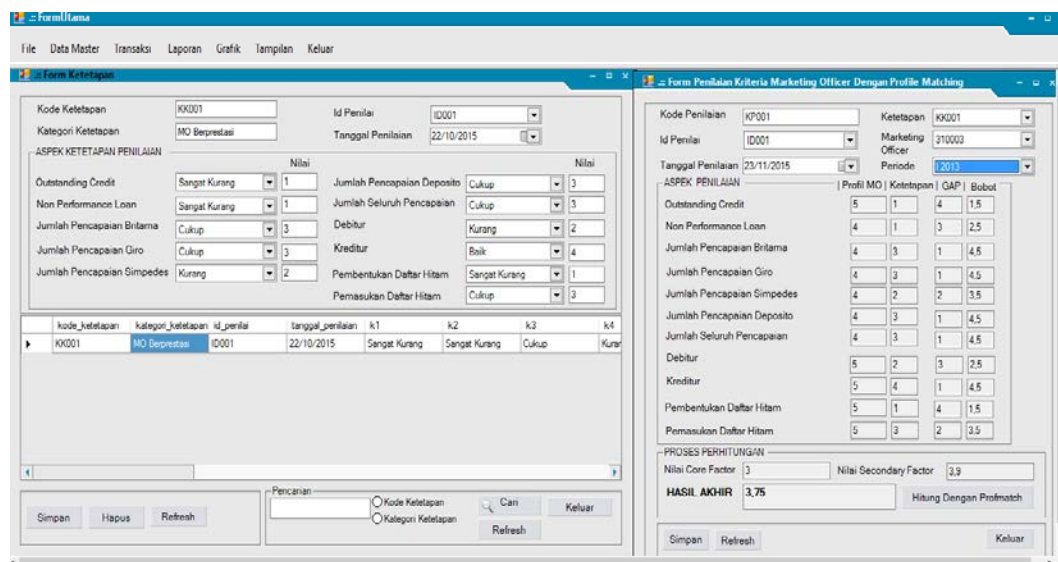

Figure 4. Display of Decision Support System

7. Conclusion

Marketing Officer Selection Process Achievement is a very important factor in Bank Rakyat Indonesia Branch Office Katamso Yogyakarta to determine the level of employee performance and improve the quality of banking business progress. In the process profile matching method to help make a ranking. SPK position in this study is a decision support, not replace the role of decision makers (decision maker), so that the decision maker is fully entitled to refer to the SPK or not. With

the election SPK Marketing Officer this Achievement hopes to help more appropriate and effective in data checking and provision MO assessment which has been determined by the BRI.

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