The influence of Human Resource Management Information System (HRMIS) Application towards Employees Efficiency and Satisfaction

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Abstract. The transformation of human resource information management activities from traditional practice to urban computerization method in some way lead to dissatisfaction amongst some government employees. However, this transformation is necessary in E-Government era as its allow employees to accomplish human resource function in more effective and efficient manner. In response to this emerging trend, government has introduced HRMIS application for government organization. HRMIS application is one of the integrated e-government services that provide single interface for government employees to perform human resource function and act as a central database for public sector. In relation to this, a study is conducted to investigate the influence of Human Resources Management Information Systems (HRMIS) towards employees’ efficiency and satisfaction after the implementation of the system. The study involves 191 employees from different departments at Terengganu Police Contingent. A simple random sampling was used to collect the data and were analysed using reliability analysis, descriptive frequency analysis, and Pearson’s correlation analysis. When these variables were tested simultaneously, the result shows that HRMIS application, user characteristics and organization support have positive influence on Terengganu Police Contingent employees’ satisfaction. The study also provides valuable insight to various stakeholders particularly to the policy makers, and organizational members about the importance of HRMIS enforcement in the organization.

1. Introduction
The implementation of information technology systems has become a necessity in a rapidly changing times. In line with the development of technology in the Public Service, a system has been introduce to public sector agencies namely Human Resource Management Information System (HRMIS). According to [1], HRMIS is one of the Malaysia e-government flagships, develop to standardize human resource functions appropriately. Main objective of the application is to enable a competent management resource through modernization of technology-based for a better and conducive working environment.

2. Literature Review
HRMIS is a system that provides database for Human Resource Management (HRM) information and acts as a business intelligence for top management for decision making. This web-based application is
accessible through the internet at any location, however it is subjected to higher level confirmation. The system operates using architecture that provides a flexible and secure infrastructure. Operate as a subsystem of MIS, HRMIS also useful to organize, measure and assessing current human resources operations with regard to production (outcomes). Besides, the implementation is aims to enhance the effectiveness and efficiency of the human resource operation. Listed objectives as follows:

- To achieve effective staffing and right-sizing of civil service through better availability of human resource management information;
- To automate human resource management operational processes;
- To improve paperless human resource management capabilities among agencies such as electronic distribution of human resource policy, manuals, and circulars; and
- To provide an open and flexible system which will fulfil and improve the information needs of operational and managerial processes at a different level of agencies.

Furthermore, HRMIS application function as a tool to ease human resource process in the organization. To evaluate its efficiency, it is important to review the application and measure the level of effectiveness in relation to satisfaction among employees (users) in public sector. The application is becoming gradually complex in data-intensive for its use especially in execution of all operations, other than decision making and planning. This system has helped human resources managers and professionals to take more rapid, accurate and effective feedbacks and decisions [2]. With the use of web-based technology, human resource functionality is easy, fast and up-to-date with efficient management transaction data between employees and top managers. Thus, HRMIS is a growing domain trend in human resource management. It has been announced as HR innovation revolution [3] and is expected to be fully utilized in all HRM government departments for more efficient service [4].

[5] highlighted human resource challenges to be more strategic, flexible, cost-effective and user-friendly with the implementation of the existing HRMIS system. It is an indication that the use of information technology has the potential to reduce administrative costs, increase production, rapid response, improve decision makers and improve the effectiveness of employee-friendly services at the same time. Cost reduction, quality service and healthy work culture are three key choices that drive human resource efficiency through the use of the latest information technology [6]. With the use of the HRMIS, employees will be able to update information at any time, referring to and printing salary slips that have been uploaded by human resource executives and to know the amount of leave remaining for vacation planning and other uses. Besides, with the implementation of HRMIS, HRM becomes easier and enables management to focus more on organizational objectives and more important activities and strategic planning plans.

Human resource executives has found that technology and information as important inputs to help them make decisions and implement processes that can bring effectiveness, as well as time and cost savings to the organization. Internationally, some organizations have successfully used web-based technology to assist human resource functions.

Overall, HRMIS implementation in the organization will benefit the enhancement of user satisfaction, which is the user can check the status of each transaction made through the HRMIS system. The entry of basic personnel information and service profiles should not be repeated repeatedly when dealing through existing systems; reducing manual and overlapping activities; reducing the use of large file space; paper usage and wastage can be eliminated and easy and user-friendly system. In addition, the HRM function in the HRMIS system has taken into account the elements of improving processes and workflows so that human resource managers can play a more strategic role and processing time especially for operational functions to be faster in speed through the use of the latest technologies.

Currently the process of applying for and checking leave, leave approval, cancellation of leave, submitting employee overtime (OT) claims, updating personal records including employee arrival records is still being done manually. This process is subject to all employees. Workers as the most important asset of an organization, play a role in improving organizational performance. Hence, the use of technology is especially important in today’s IT era which uses information at the fingertip easily and quickly. However, it can not take over the role of employees without skilled management.
Other assets such as finance, buildings, tools, technology and so forth are only valuable if employees use their policies and expertise in management.

However, there are still weaknesses in this HRMIS system and with the feedback from the end user, the employee itself provides a solution space for the system, and it is also up to the employees whether to continue using and accepting them [7]. Implementation of the new system does not automatically bring the constant benefit to the organization but the level of its use is a requirement [8].

Looking at implementation of HRMIS, non-mandatory use of typical features is often an option by employees who are disturbed in their use via web-based technology and not as a habit through manual methods. Organizations can also see the real attitude towards the implementation of HRMIS and the new level of system use and the factors that cause the use of the HRMIS system.

According to [9], the relationships towards information system success derive on the importance of six HRMIS application criteria namely information quality; system quality; service quality; system use/usage intentions; user satisfaction and net system benefits.

a. HRMIS application
i. Information quality;
   Refers to quality information where it related to user satisfaction to HRMIS system and also users’ intentions (user characteristics) toward using the system.
ii. System quality;
   System quality is related towards organizational support, where continuous support (in e.g. of ergonomics, response, technology driven and etc.) will enhance the HRMIS usage. Such limited user within IT knowledge tends to users’ characteristics (jaded, technostress, phobia etc.).
iii. Service quality;
   Service quality directly impacts usage intentions and user satisfaction with the system. Continuous support (in e.g. of training, documentation, helpdesk support etc.) will enhance the HRMIS usage.
iv. System use/usage intentions;
   HRMIS system used is posited to influence user satisfaction within the information system, where it also influences usage intentions.
v. Employees satisfaction
   Employees satisfaction directly influences the usage of the HRMIS system where there is a positive relationship between system usage and user satisfaction.

b. Organizational Support
[9] study shows that there is proof for a positive relationship between perceived organizational support and affective organization commitment. Organizational Support Theory (OST) rectifies that perceived organizational support increase affective organizational commitment (e.g. employee’s welfare) and thus helps the organizations to reach its goals [10]. [11] define person characteristics such as; age, gender, and IT experience performed high impact on user’s satisfaction (behaviour) towards IT usage. In this context, end-user satisfaction (behaviour) influenced by their feelings (situation) and by organizational (IS) support (training, discussion, support).

c. Employees Satisfaction
According to [12], satisfaction referring to someone feelings or attitude based on various factors upon given situation. The constant change of attitude due to technology constraint can lead employees to disobey or mistreated the importance of using HRMIS on gathering information and data resource for daily operation tasks. Upon technological rapid changes, senior employees tend to violate HRMIS system due to various factors such as bad experience on managing the system [13]. Earlier studies have discovered that there are strong relationships between employee’s satisfaction and intended/actual use of information system [14]. Employee’s satisfaction refers to the successful relations between the information system and its user which is the employees [3]. To summarize the literature review; documentation, user interface, timeliness, accuracy, relevance, and ease of use of the HRMIS
system replicate the employees’ satisfaction within the system. Individual impact and organizational impact also play an important role towards HRMIS longevity usage.

To summarize, the ongoing employment of HRMIS application system is to standardize its usage as a central database for public sector management resources towards efficiency and effectiveness. The transformation of rather a traditional way to a more urban computerization system managing and handling information could lead to dissatisfaction on several government employees. Measuring employee’s satisfaction and technology acceptance is a must for identifying the acceptance and satisfaction of Terengganu Police Contingent Headquarters employees on managing HRMIS system to compute information on human resource. Therefore the objective of this study is to identify the relationship between HRMIs application and organization support on employees satisfaction at Terengganu Police Contingent.

**Figure 1** Proposed Conceptual Framework

**Hypothesis 1**

**H1:** HRMIS application is positively related towards employees’ satisfaction;

**Hypothesis 2**

**H2:** Organizational support is positively related towards employees’ satisfaction.

3. **Research Methodology**

The population of this study consists of the government servant that works in Terengganu Police Contingent, Terengganu. Since the population of Terengganu Police Contingent, Terengganu is 380; the sample size selected was 191 respondents.

A set of questionnaires which was adopted from previous studies and formulated was designed and distributed face-to-face to the employees. The questionnaire comprises of 4 sections which contains demographic information, organizational commitment and employee motivation and sharing of knowledge. The respondents were asked to rate organizational commitment and work motivation using a five-point scale, ranging from “1-strongly dissatisfactory” to “5-strongly satisfactory”.

Researchers are using correlations to seek significant relationship between two variables. Correlation research defines the variables that have mutual interaction between them. This is to examine the relationship between those 2 variables. The sampling technique that will be used is simple random technique. This is because by applying this technique, each member within the populations will have an equal chance of being selected as a respondent. For the case of Terengganu Police
Contingent employees, this sampling technique will give an ease of assembling the sample. It is a fair and constant technique in order to select a sample from the population where each member is given equal opportunities to be selected. All data and information gathered from the questionnaire then will be evaluated and processed through Statistical Package for Social Science (SPSS) system.

4. Results

4.1 Reliability Analysis
Coefficient meanwhile is used to access the reliability. Cronbach's Alpha value is the compliance value depending on the correlation between the questions or expressions. This value indicates reliability levels of the questions in scales. If Cronbach's Alpha value is over 0.70 and even more, the scale is considered reliable. Based on the table above, Cronbach's Alpha showed that overall positively correlated to each other and is internally consistent. Overall findings using Cronbach's Alpha tools in quest on the reliability test (ALPHA) method shows that all IV and DV are important and positively interrelated to each other's in this research.

4.2 Pearson Correlations
The correlation then will measure the relationship between two (2) sets of data. The range will be somewhere in between -1 and 1. To test the Pearson Correlation, the researcher will use every significant IV and pair it to the respective DV to resolve any correlation between them. After the questionnaires been keyed in through SPSS system, the Pearson Correlation tools had been used to analyse the IV and DV to prove their relationship towards hypothesis made by the proposal research before. Based on the table above, Cronbach's Alpha showed that overall positively correlated to each other and is internally consistent. Overall findings using Cronbach's Alpha tools in quest on the reliability test (ALPHA) method shows that all IV and DV are important and positively interrelated to each other's in this research.

| Variable                        | Cronbach Alpha | No of Items | Strength of Association |
|---------------------------------|----------------|-------------|-------------------------|
| HRMIS application               | 0.932          | 5           | Excellent               |
| Organizational support          | 0.949          | 6           | Excellent               |
| Users satisfaction              | 0.933          | 5           | Excellent               |

Table 1: Cronbach's Alpha Result
Table 2: Pearson Correlation

|                     | Mean HRMIS Application | Mean Organizational Support | Mean Employee’s Satisfaction |
|---------------------|------------------------|-----------------------------|----------------------------|
| Mean HRMIS Application Pearson Correlation | 1                       | .807**                      | .767**                     |
| Sig. (2-tailed)     | .000                   | .000                        | .000                       |
| N                   | 97                     | 97                          | 97                         |
| Mean Organizational Support Pearson Correlation | .807**                 | 1                           | .806**                     |
| Sig. (2-tailed)     | .000                   | .000                        | .000                       |
| N                   | 97                     | 97                          | 97                         |
| Mean Employee’s Satisfaction Pearson Correlation | .767**                 | .806**                      | 1                          |
| Sig. (2-tailed)     | .000                   | .000                        | .000                       |
| N                   | 97                     | 97                          | 97                         |

From table 2, the Pearson Correlation range for the relationship between HRMIS Application (IV) and employee’s satisfaction (DV) stands at .767. The relationship between these IV and DV according to Pearson Correlation stands at (0.6 and 0.8) (strong correlation) where (r= 0.767). This show that there is a significant positive correlation between HRMIS application and employee’s satisfaction and the strength of the correlation is strong. Based on table 2, the Pearson Correlation ranges for the respective IV (organizational support) and the DV (employees’ satisfaction) stands for .806. This range between 0.8 and 1.0 range and it indicates a very strong correlation between both IV and DV (r=.806). The Pearson Correlation findings proves out that hypothesis 2 shows a positive correlation between organizational support and employee’s satisfaction and the strength of the correlation is very strong.

5. Conclusions and Suggestions

Overall result had proved that all the hypotheses had been answered well. There are two independent variables highlighted (HRMIS application, and Organizational support) where questions designed to determine whether there are positive relationship with the dependent variable (Employees satisfaction). This study is important to rectify the corrective action to ensure that HRMIS application is perform efficiently and effectively in Terengganu Police Contingent. The result of this study hopefully can be uses as a guideline for the enhancement of future implementation on HRMIS application throughout government organization and can further applies in other agencies. Application of the HRMIS system can also save cost, and time especially when the paperless concepts is introduced and fully applied.

Studies may be conducted involve more respondents to see the extent of HRMIS application acceptance by employees in the future. In addition, the application can be a benchmark to other e-government projects. As such, it will help to reduce the failure percentage of e-government projects particularly HRMIS application. [15] supported that Information System also influence by self-readiness of employees, awareness and openness towards technology. To sum up, three suggestions recommended to assist the management of the Terengganu Police Contingent to improve the efficiency of the HRMIS application in the future: -

1. Upgrade IT facilities to support the usage of HRMIS application such as enhancing integration of the main server capabilities.
2. Emphasis on the full utilization of HRMIS application among the employees.
3. Provide hands on training on HRMIS application usage to employees.
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