

CHAPTER 4

RESEARCH RESULTS

4.0 INTRODUCTION

This research focuses on the use of e-Government in Public Service Department (PSD). The results were from primary data that is based on questionnaire distributed to the employees in PSD. It attempts to summarize response collected from questionnaire using appropriate statistical analysis. This part is categorized into two main sections. The first section will discuss respondents profile in general. The second section will concentrate on respondent perception on factors, barriers, effectiveness and problems that influence the use of e-Government in PSD.

4.1 PROFILE OF RESPONDENTS

This section will discuss respondent profile based on ethnicity, gender, system used and level of formal education as indicated in Part A of questionnaire form (refer to Questionnaire in Appendix 1).

Based on ethnicity, hundred percent of the respondents are Malays. It shows that there is no respondent representing Chinese, Indian and other ethnic group. This is simply because there are many Malays working in government departments especially PSD compared to Chinese and Indians.

Table 2

Respondent Distribution by Gender

GENDER	FREQUENCY	PERCENT (%)
Male	48	51.6
Female	45	48.4
TOTAL	93	100

Overall, 51.6 percent of the respondents are males and 48.4 percent are females as shown in Table 2. This shows that there is only a difference of 3.2 percent (3 male respondent more than female respondents). The distribution is more or less balance because the difference is only a small percent.

Table 3

Respondent Distribution by the System Used

SYSTEM	FREQUENCY	PERCENT (%)
HRMIS	64	68.8
PMS	12	12.9
e-SPKB	12	12.9
e-Procurement	5	5.4
TOTAL	93	100

From Table 3, HRMIS (Human Resource Management Information System) is the system used by majority of respondents, which accounts for 68.8 percent. Other systems such as PMS (Project Monitoring System) and e-SPKB (Elektronik-Sistem Perancangan dan Kawalan Badjet) each account for only 12.9 percent. This is due to the HRMIS project is one of the main projects under e-Government and the main agency is Public Service Department (PSD). This suggests that the employees are using the system internally within the divisions. Based on the interview, HRMIS project, HRM and IT

divisions were among the most using the system and this is the reason why the three divisions have been chosen as a sample.

Table 4

Respondent Distribution by Level of Formal Education

LEVEL OF FORMAL EDUCATION	FREQUENCY	PERCENT (%)
SPM	24	25.8
STPM	6	6.5
Diploma/Bachelor Degree	45	48.4
Master/Professional Qualification	18	19.4
TOTAL	93	100

Table 4 shows that 48.4 percent of the respondents received education up to diploma or bachelor degree level. Majority of the respondents are from diploma or degree level group whereas only 6.5 percent of the respondents received education up to STPM level.

4.2 PERCEPTION OF EMPLOYEES ON THE FACTORS THAT INFLUENCED E-GOVERNMENT USAGE

To measure the perception on the factors that influenced the use of e-Government, respondents were given 14 statements which are divided into five main factors, as given in Table 5 (please refer to Part B questionnaire form as in appendix 1).

In the research, respondents were asked to evaluate the factors that influence the use of e-Government in PSD. These factors can be grouped into five categories; government’s order, appropriate time, organization characteristics, efficiency and productivity and also individual characteristics. The responses given are shown in Table 5.

Table 5

Respondent Reaction towards Factors

Factors That Influenced The Use Of E-Government	Mean
Government's Order	
Government demand for ICT usage	4.41
In order to achieve Vision 2020	4.44
Government's order to learn ICT, therefore will not be left behind	4.26
To bridge the digital divide between those who have use of and access to ICT versus those who do not, especially in public sectors	4.06
Appropriate Time	
To face the global competitive advantage where ICT is very much needed	4.47
Challenge of transforming to information era/age and high technology	4.49
Organization Characteristics	
To exist a lifelong organization learning, since public sector has to become a knowledge center	4.33
To make a public sector a 'paperless administration'	3.97
ICT is for the organization to do work in new and different way	4.30
To make a change and invention in administration (public sector reform/new public administration)	4.31
Efficiency and Productivity	
To make PSD an efficient and effective delivering services	4.54
To reinvent government by using ICT to improve productivity in public sector	4.38
To increase the quality of delivering services to the public	4.44
Individual Characteristics	4.27
To increase knowledge of K-workers among the civil servants	

Overall, the respondents' reaction shows that all the factors influenced the use of e-Government in PSD. This is due to the range of mean score is between 3.97 to 4.54. This explains that the influence is strong among the factors.

Table 6

Factors That Influence The Use Of E-Government

Ranking of Factors In Group	Average (Mean)
Appropriate Time	4.48
Efficiency and Productivity	4.45
Government's Order	4.29
Individual Characteristics	4.27
Organization Characteristics	4.23

Based on Table 6, by looking the factors in grouping, appropriate time shows the highest mean score which is 4.48, followed by efficiency and productivity with mean score of 4.45. Overall, the difference in score is quite small, and each statement under the factors was not equal; some are less and some are more. Therefore, it is inaccurate by looking from this point of view. For that reason, there is a need for ranking the statements individually.

Table 7

Ranking of Top 5 Individual Statements from the Group

Ranking of Individual Statements	Mean
To make PSD an efficient and effective in delivering services	4.54
Challenge of transforming to information era and high technology	4.49
To face the global competitive advantage where ICT is very much needed	4.47
In order to achieve Vision 2020	4.44
Government demand for ICT usage	4.41

It can be seen that from Table 7, these statements gave the biggest influence in the use of e-Government because they are the reasons for the organization to adopt e-Government and promotes ICT. Later, the next chapter will discuss more on the factors that influenced the use of e-Government in PSD.

4.3 PERCEPTION TOWARDS BARRIERS IN ADOPTING E-GOVERNMENT

Respondents were asked to evaluate barriers in adopting e-Government in PSD. The barriers can be divided into three categories; namely, the external factors, individual, and organization characteristics. Table 8 indicates the results:

Table 8

Respondent Reaction towards Barriers

Barriers In Adopting E-Government	Mean
External Factors	
High cost of ICT infrastructure	3.85
Lack of support facilities	3.53
Using unsuitable software for the application	3.49
The application system for e-Government project is still in developing process	3.94
Individual Characteristics	
Lack of IT knowledge (computer illiterate)	3.67
The employees' negative attitude towards ICT	3.37
There are civil servants who are computer illiterate	3.63
Lack of initiative from the employees to upgrade ICT knowledge	3.68
Organizational Characteristics	
Lack of upper management (CIO) support or enforcement in order to have a successful e-Government implementation	3.08
Lack of expertise and technician provided by the organization	3.48
Lack of service support from the agencies involved	3.49
The upper management themselves, lack of IT skills	3.45

Overall, the reaction towards the barriers to adopt e-Government in PSD is at the moderate level where; the mean score is 3.08 to 3.94.

Table 9

Barriers in Adopting E-Government

Ranking of Barriers In Group	Average (Mean)
External Factors	3.70
Individual Characteristics	3.59
Organizational Characteristics	3.38

The table above shows that external factor becomes the main factor that promotes barrier in adopting e-Government.

Table 10

Ranking of Top 5 Individual Statements from the Group

Ranking of Individual Statements	Mean
The application system for e-Government project is still in developing process	3.94
High cost of ICT infrastructure	3.85
Lack of initiative from the employees to upgrade ICT knowledge	3.68
Lack of IT knowledge (computer illiterate)	3.67
There are civil servants who are computer illiterate	3.63

From the table above, the application system for e-Government is still in developing process which is under external factor has the highest score of 3.94. It is followed by individual characteristic which is lack of initiative from the employees to upgrade ICT knowledge, that is 3.68. The table also shows that there are still some employees who are computer illiterate.

4.4 PERCEPTION TOWARDS PROBLEMS THAT ARISE AFTER THE IMPLEMENTATION OF E-GOVERNMENT

One-Way Variance Analysis (ANOVA) was run to test the relationship between the systems used (HRMIS, PMS, e-SPKB and e-Procurement) after the implementation of e-Government in PSD with external, organization and individual problems that influenced.

From the results shown in Table 11, there is a significant difference between e-Government systems with external, organization and individual problems. The P-value for the systems and external problem is 0.04 whereas the value between systems and organization is 0.01. On the other hand, P-value between systems and individual problem is 0.06 and 0.07 respectively. Therefore, the problems are the system is often being misused for other purposes, most part of the document still need to be stored in a usual form, learning IT is a waste of time and learning IT is a burden. This suggests that external, organization and individual factors have created problems faced after the implementation of e-Government.

Table 11

Relationship between e-Government Systems with External, Organization and Individual Factors (Problems)

Problems	F Value	Significant
External Factors: Often the system is being misused for other purposes	2.94	0.04
Organization Factors: Most part of the document still need to be store in a usual form	3.95	0.01
Individual Factors: Learning IT (ICT) is a waste of time	2.49	0.06
Learning IT (ICT) is a burden	2.46	0.07

4.5 PERCEPTION OF EMPLOYEES ON THE EFFECTIVENESS OF E-GOVERNMENT

This part will explain the employees' perception on effectiveness after the implementation of e-Government.

Individual Characteristics

The influence of individual characteristics as shown in Table 12 where the positive attitude towards the use of e-Government and its effectiveness (willing to accept and make change in work) is the main factor in individual characteristics, in which the mean score is 4.39 and 4.46 respectively. This is followed by other factors such as increase job efficiency (4.19), and adoption of ICT for different kind of situations (4.02). This explained that these factors have a strong influence or relationship towards the effectiveness of using e-Government in PSD.

Overall, most of the respondents agreed with the statements that influenced individual characteristics, which is the main factor that results in using e-Government effectively. This is according to the agreement level (%), where most of the total-agree percentage shows 100 percent agreement with the statements.

Therefore, in order to have effective systems (e-Government) in the organization, individual characteristics should be regarded as an important factor that must be given a priority in adopting e-Government. From the statement that 100 percent of the respondents agree that they totally support e-Government, this indicates they accept e-Government and willing to make a change in work, they apply ICT for the organization development, they adopt ICT skills for different situations, and they increase their job efficiency.

Table 12

Respondent Agreement Level towards Individual Characteristics

Individual Characteristics	Agreement Level (%)					Total-Agree	Mean	S.D
	Strongly Disagree	Disagree	Moderately Agree	Agree	Strongly Agree			
1. Increase job efficiency	0	0	7.5	65.6	26.9	100.0	4.19	0.56
2. Adopt ICT skills for different situations	0	0	17.2	63.4	19.4	100.0	4.02	0.61
3. Apply ICT for organization development	0	0	15.1	68.8	16.1	100.0	4.01	0.56
4. Totally support e-Government	0	0	0	61.3	38.7	100.0	4.39	0.45
5. Accept EG and make a change in work	0	0	0	53.8	46.2	100.0	4.46	0.50

1. I can increase my job efficiency
2. I am willing to adopt the ICT skills for different kind of situations
3. I know the suitable condition to apply ICT knowledge for the organization development
4. I am totally support EG project
5. I am ready to accept and make a change in work

Organization Characteristics

For the factors of organization characteristics, ICT e-Government may increase PSD service quality that has the highest mean score, 4.44. The second highest mean score that influenced, which is e-Government can increase effectiveness in decision making (4.02).

Perspective from agreement level explains that, there are respondents who strongly disagree but the percentage are small, 2.2 and 5.4 percent except for factor that ICT e-Government increase PSD service quality.

From the statement that 100 percent of the respondents agree that ICT e-Government may increase PSD service quality. This shows that e-Government system is effective if it can increase PSD service quality.

Table 13

Respondent Agreement Level towards Organization Characteristics

Organization Characteristics	Agreement Level (%)					Total-Agree	Mean	S.D
	Strongly Disagree	Disagree	Moderately Agree	Agree	Strongly Agree			
1. ICT e-Government increase PSD service quality	0	0	1.1	62.4	36.6	100.0	4.44	0.50
2. Increase communication level	0	2.2	16.1	66.7	15.1	97.9	3.95	0.63
3. ICT culture make organization 'lively'	2.2	2.2	21.5	59.1	15.1	95.7	3.83	0.79
4. E-Government increase effectiveness in decision making	0	5.4	5.4	71.0	18.3	94.7	4.02	0.68

1. ICT EG may increase PSD service quality
2. Exist an increase in communication level between the organization members
3. ICT culture will make the organization 'lively'
4. EG can increase effectiveness in decision making and negotiation

Efficiency and Productivity

Under this variable, factor to increase quality of delivering services give the highest influence, where the mean score is 4.40. This is followed by increase information delivered efficiently in which the mean score is 4.28. Overall, this variable is influenced because there is no other factor that the mean score is lower than 4.00.

If analyze in-depth part of respondent agreement level, there is no disagreement among respondents that disagree with the variable. It strongly concludes where stated that this variable influence the effectiveness of using e-Government in PSD.

Table 14

Respondent Agreement Level towards Efficiency and Productivity

Efficiency and Productivity	Agreement Level (%)					Total-Agree	Mean	S.D
	Strongly Disagree	Disagree	Moderately Agree	Agree	Strongly Agree			
1. Increase quality of delivering services	0	0	5.4	45.2	49.5	100.0	4.40	0.59
2. Increase organization as a whole	0	0	8.6	68.8	22.6	100.0	4.14	0.54
3. Increase efficiency of accessing information	0	0	4.3	64.5	31.2	100.0	4.27	0.53
4. Increase information delivered efficiently	0	0	6.5	59.1	34.4	100.0	4.28	0.58
5. Increase communication efficiency	0	0	16.1	54.8	29.0	100.0	4.13	0.66

1. E-Government may increase quality of delivering services
2. E-Government may increase organization as a whole
3. May increase efficiency in terms of accessing/retrieving information
4. May increase information delivered efficiently
5. May increase communication efficiency; anytime, anywhere and to anybody