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## The Impact of The Biometric System on Election Fraud Elimination: Case of The North of IRAQ

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### Abstract

In recent years technology and management information system has been an excellent response too many global challenges, technology innovation has expanded over almost all the sectors of, and it made many processes more accurate and very faster than before. Technology systems played a big role part in election processes in many democratic countries nowadays. The commission, in Iraq, suffers from many problems such as fraud, time-consuming and delays in the election processes that take a long time and also witness a delay in revealing the results. This research paper focuses on adapting the biometric system in Iraq; there are several different perspectives to specify the IHEC's employees and manager's attitude towards technology in general and Biometric system specifically. Most of the staff members feel confident about transforming into a technology system. In their responses to the questionnaires, most of them focused on getting trained before they start using the system. In this research, the data is collected by using survey technique from the independent high electoral commission managers and staff members, and the data is analyzed by using SPSS.

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## 1 Introduction

A management information system is a core element of the government reform process, and electronic government (E-Government) is becoming an absolute need in the future governance, supporting future development, decision and policy making, and the reform process at all levels of government. E-government organizes data eliminate the fraud and secures an accurate outcome. It makes finding

and detecting governmental issues very easy. One of the information management techniques that has been used frequently nowadays is the biometric system. (Bélanger & Crossler, 2011) [1]; (Salahuddin & Rusli, 2005) [2]. Biometric system refers to an automated technology system that recognizes individuals by identifying their anatomical and developmental features such as fingerprint, face, iris, and voice. This system has been reinforced the democratic quality of elections, ensuring electoral integrity in many countries ( Lee, 2012) [3].

Since the inception of democracy to the third world countries, there has been a significant concern by the populace and voters about the impact of their votes,

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does it really count does it really have impact on their life knowing “democracy” means ruled by the people, is what’s happening in the third world countries democracy or it is just a big theater show. The core value of the democracy is the protection and promotion of civil rights, interest and welfare, their ability to be a vote for and be voted for; therefore it requires individuals to participate in the political election (Bogaards, 2007) [4]. Various government across the globe have implemented methods and systems to enable a free and independent electoral process, however, interfere of internal and external forces on elections, has continued to be a cause of concern and a big issue to be discussed both by governments and academics (Salahuddin & Rusli, 2005) [5].

Biometric equipment procedure the physical features such as the voice tone or the shape of the hand to recognize people automatically. Other characteristics such as our writing style can also be used by computers as well. The word “identity” is used here less often. The human opinion, hand shape or any other biometric metric measure contains nothing to tell the computer your age, name or place of origin, or to grant your right to vote. Other features besides the internal ones such as (passport, birth certificate, naturalization papers) (Carpenter, 2011) [6]. A biometric template is made possible by the utilization of a feature that is unique. A biometric mold must be one and only; this grants a person to be uniquely recognized with minimal failures. Stability: biometrics features of a person stay constant or might change a little making the registered template still matchable. The chances of the registered data of a person being damaged should remain very little (Juhola, *et al.*, 2013) [7].

Easily captured: biometric systems should be able to withdraw the biometric features correctly and efficiently; thus the features should be visible externally, fingerprint method of identification, are the most preferred method of identification among all the biometric methods of identification because its application is reliable and low cost (Maltoni, *et al.*, 2009) [8]. Fingerprints are more preferred because individual fingerprints are unique in nature, there are no same fingerprints for two people, they cannot be easily changed, the probability of losing, forging or imitating an individual fingerprint is utterly impossible. Furthermore, each fingerprint has been characteristic structures as a result of fingerprints of individually one finger of a person are dissimilar (Bolle, *et al.*, 2013) [9]. Therefore fingerprints are the most acceptable method for providing, valid and storable biometric data, for prevention of election fraud, fingerprints method can easily be accessed via internet application, this thesis tends to reveal the impact of

the biometric system on election fraud and how it can be deterred and combated.

Elections are usually ruined by different types of malfeasance including fraud. According to the database of the political institutions (DPI)’s data, about a percentage of 20 recent elections encountered so much fraud and biases that the result is affected (Kim, *et al.* 2007) [10]. A different database that recognizes fraud only in situations where international election observers were present reports “reasonable or main complications of election integrity” in a part of state-elections known in the middle of years 1980 and 2004. Election fraud is mostly seen and usually very serious. The disengagement of election observers is another main solution meant to promote the uniqueness of the elections in both developed and undeveloped countries. Assistance for observer missions is another aspect in democracy promotion efforts by international and local actors in places with new or delicate electoral institutions (Tassabehji & Kamala, 2012) [? ], about 80% of elections that took place worldwide in 2006 were monitored by observers. The primary reason for their engagement being their ability to reduce and prevent electoral irregularities never the less, very little is considered about the usefulness of observes in eradicating fraud, and the findings of different studies are not easy to compare. Biometrics is a brief word for technology for quantifying and evaluating the human body parts such as the skin ridges on fingers, eye features, voice characteristics, facial patterns and a lot of other human aspects. These human characteristics can be documented and evaluated with electronic technology; finger scanners, iris scan, voice sound record or a photograph of the face. However, the most commonly used biometric tools are the fingerprint and photography (photo ID) of the face (Bolle *et al.*, 2013) [11].

A biometric system is a technique that captures and preserves individual unique characteristics and identifiers based on their physical characteristics. It uses different approaches to capture individual sorts such as fingerprints, faces, hand shapes, retinas, irises, and voice tracks. (Altun & Bilgin, 2011) [12]. Biometrics system uses this method either individually or joined together in standardized systems. Automatic identification of people by biometric technology uses voice patterns, eye scans, and handwriting style, faces, hands or fingerprints which are commonly used in election processes for fraud elimination. The United States uses fingerprints, hand-shaped and eye-scanning functions in driving licenses and social service plans. In the election process, fingerprints are being introduced in several countries such as the Philippines, Jamaica, Argentina, and Cambodia. What are the odds of using this technology in our

voting systems? (Mishra, 2010) [13].

## 2 The Case Study of North Iraq

The Independent High Electoral Commission (IHEC) is the Iraqi Election Commission. This is “led by a nine-member board of directors, seven of whom voted and have to Iraqi citizens. The other two members are principal electoral officers and external experts hired by the United Nations”. As of the end of 2013, IHEC and media informed that IHEC signed a biometric system contract with a Spanish-based company that have to be utilized in the 2014 general election. The information state the company, Indra, will implement election on biometric systems to registers voters. This will consist of the issue of 22 million ID chips with voters details recorded on them. In relation to the international foundation for electoral systems “IFES,” “because of the absence of sufficiently time, it was not practical to enlist 21.5 million voters utilizing biometric data before these races. Subsequently, the procedure will restart in June 2014 and will proceed until the point when every single Iraqi voter are enlisted utilizing this strategy. The IHEC’s goal is to have this finished by the 2018 parliamentary election (Trumbull IV & Martin, 2011) [14]. While little is thought about the subtleties of this endeavor, executing a biometric voter enrollment and recognizable proof framework has demonstrated profoundly risky in numerous nations as of late, particularly when done inside a brief timeframe outline.

### 2.1 Manual System Process in Election

In the past, many governments had used a manual system of counting in the process of election, voters place a stamped voting papers in sealed ballot boxes after they go into a check-in process, after they cast their vote the voters put their index finger into a special ink that remains on the figure for a week or so to prevent multiple voting. This method of voting seemed untrustworthy by both the voters and the independent national electoral organizations. The stamps and the ballot boxes are very easy to get copied. There are many ways to prevent the special ink from staying on the finger. There have been incidents in many countries that powerful parties have prepared ballot boxes full of papers on their benefit and exchanged with the real boxes. Many incidents with people oil their index figure or use bleach so the ink will go away so they can vote again. Besides all the easy ways of the voting system get rigged in a manual way, there are many problems with a counting of the votes, election staff members use a blackboard to separate and count the votes. This process of counting and separating the votes again is very simple to get hacked, and it takes a long time. The cost of the manual process is

high due to paper printing (Anno, *et al.*, 1993) [15]. The ballot box in the classical election system is the most important equipment in the election process; it has to be handled, transferred and obsolete in a very secure way. Many courtiers have started using smart technologies as a replacement of old-fashioned manual ways, such as tomb print and biometric system. Due to technological innovation, old election system will soon be inexistent in a different part of the world. The smart systems are more secure, trustable and the process is way faster than the manual system, in addition, it is less costly and in the long run. (Commissioners, 2016) [16]. There has been no work to date which includes systematic research on how election fraud can be detected or deterred. In my opinion, this is because of lack well-coined definition of what election fraud, vote rigging, is and malpractice means.

Biometric system has been greatly accepted across, the globe from organizations to governments. Moving down to Iraq as my research focuses on, the election process was conducted manually, and it is carried out by the independent high electoral commission. This commission (IHEC) suffers from many problems such as fraud, time-consuming and delays in the election processes that take a long time and also witness a delay in revealing the results. Recently the independent electoral commission with the help of government has recently made an announcement to use a biometric system to element ate the election fraud. Transferring from a manual voting system and adapting the new biometric system is not an easy process. The independent electoral commission has to introduce the system to people and the government officials so they can accept and support the system, they have to explain to them the need of the change and the effectiveness of the new system in preventing the election fraud. Moreover, the independent electoral commission has to train and teach its own staff members on how the biometric system works and how to use the equipment. To be successful, this new system needs a big financial support from the government and stakeholders, they have to accept the method in order to avoid the system failure; if government do not accept the system it will seize the funds it needs, or disregard the systems and lastly de-campaign the registration system of using biometrics. The purpose of this study has been discuss the efficiency of the biometric system throughout the electoral process and to reveal its impact on the elimination of Iraqi election fraud. I used local dwellings, commissions and government staff to behavior field surveys as the goal of this examination to gauge the effect of bioinformatics systems on the electoral process. This research is imperative because it will reveal the basic relationship of the Independent Electoral Commission’s adoption of biometric

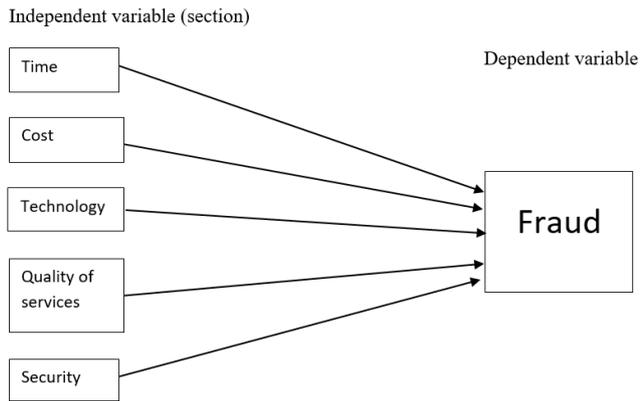


Figure 1. Research model

systems and the elimination of fraud throughout the electoral process.

### 3 Methodology

In this study, quantitative methods had been used to collect data to take information from participants to take answers and discovery a reasonable result to the research problematic. The impact of the biometric system on election fraud elimination: the case of north Iraq. As shown in Figure 1

#### 3.1 Quantitative Research

Quantitative study method supports to intensify reliability, impartiality, and generalizability of finds (Conrad & Serlin, 2011) [17]. The approach examines statistics, number and other quantifiable deliberately of investigation of wonders. Also, it is used to reaction request on association's private quantifiable factors by a reason to clear up, foresee and control wonders. In addition, it presents a consistent and precise approach to give a sensible response for research paper questions (Leedy and Ormrod, 2005) [18]. Quantitative strategies are normally characterized as a deductive methodology; it is an incredible system to set up cause-impact association among variables and their consistency in a causal relationship. The method is perceived to stay a covered method because it covers an abnormal state of command over coincidental components and the control of factors. The rate of reliability is increased, and bias is decreased. Theories of the fundamental connection between factors and variables and hypothesis are tested. In addition, it permits drawing inferences around connection (Amutha & Ramganes, 2013) [19]. The usage of instruments such as surveys to collect data are the key elements of numerous quantitative researchers: checks, and dependence on probability model to check an mathematical hypothesis which relates to the research question (Conrad & Serlin, 2011) [20]. The research are increasingly impartial and analyzed information can

be connected as a piece of testing the speculation. The polls as a celebrated kind of hardware for performing quantitative research were utilized for this exploration.

#### 3.2 Data Collection Tools

The fundamental piece of the research and examination in the field of training is the information collection. There are numerous methods of gathering information, and these trust upon the reason and points of the research. Data were gathered in this approach concluded quantitative methods. Instruments of investigation in this study are correct of all methods of data collection; survey research is more qualified to give answers to by collecting data through the use of questionnaire of research questions better than other questionnaires that gather information through employee and manager of IHEC. 297 forms were shared to the branch of IHEC, and 38 of those forms were empty without any answer, and 41 participants filled just demography sections and mistaking in answering. This indicates that they did not participate in the general election.

#### 3.3 Questionnaires

The questionnaires were made in English and Kurdish to make them to be easily understood by the employees and managers. In this application of the questionnaire, this research was aimed at gathering general results and sharing the questionnaire by a method known as simple random sampling (SRC) on the managers and employees from independent high electoral commission in the north of Iraq (IHEC).

#### 3.4 Statistical Package for the Social Sciences (SPSS)

Discharged in 1968 is the measurable bundle for the sociologies, as of late the program is formally called I.B.M SPSS insights, and it has turned out to be a standout amongst the most utilized measurements programs in sociology specialists including market, wellbeing, government and instruction analysts among others (Argyrous, 2011) [21]. Together with statistical analysis, this program takes care of information documentation and information the board (making inferred information, record reshaping, case determination) (Levesque, 2005) [22]. To decide rates, SPSS v23 were utilized for this undertaking, the mean, and the standard deviation to give a response to the examination question of the investigation. Portrayal of each measure pursues beneath.

In the Table 1 explain the demography information content for the IHEC members, and demography is

**Table 1.** Demographic information about employee

		Frequency Percentage	
Gender	Male	128	58.7
	Female	90	41.3
	Total	218	100
Age	18-25	58	26.6
	26-35	95	43.6
	36 and older	65	29.8
	Total	218	100
Position	Manager	29	13.3
	Employee	189	86.7
	Total	218	100
Years' experience in IHEC	1-5	71	32.6
	6-10	82	37.6
	10 and higher	65	29.8
	Total	259	100
Education level	High school	23	10.6
	Diploma	99	45.4
	Bachelor	81	37.2
	Master	10	4.6
	PhD	5	2.3
	Total	218	100

classified in giving many sections, which includes in the demography table such as (Age, Gender, Position, years' experience in IHEC, education), then it is analyzed by the static program SPSS and demography is most important section in questionnaire survey. In this table show that according to gender section 58, 8% male and 41, 3% female was the section in this questionnaire respondents, completely is 100%. From the age, the component has three types of age which 26% from age 18-25, 43, 6% from age 26-35, 29, 8% from age 36 and over, overall equal to 100%. Then from the position part, have to kind of position employee and manager which's 13, 3% is manager and 86, 7% is employed. It has also another part in this table is experience, it is illustrated the experience for the commission members in the IHEC 32,6% between range of the year 1-5, 37,6% between range of 6-10 and 29,8 % is 10 and over, overall is equal to 100%, at the end of section is education, in this we have five sample degree which is high school rate is 10,6% , diploma rate is 45,4% , bachelors 37,2% , master is 4,6% and Ph.D. is 2,3% then overall is equal to 100%.

## 4 Findings

This chapter shows the aftereffects of gathered information, that is evaluated the employee and manager attitudes toward the use of independent high elec-

toral commission (IHEC). The effects derivative from received data over via quantitative methodology together that questionnaires and survey collected those data. The analysis of the data based on the parametric statistical test. As Robson (1994) [23] approved that a parametric statistical test is a test whose model specifies certain conditions about the parameters of the population from which the research sample was drawn. In simple terms, the parametric data analysis procedures rely on being fed with data about which the underlying parameters of their distribution is known, typically data that are usually distributed. ANOVA analyzed the parametric data Individually, the survey were exhibited with respect to rates, frequencies; mean, standard deviations, just as overview strategy, is performed to give a legitimate response to accomplish sensible responses for the exploration questions — their stages in this research. The period for this issue research employee and manager from IHEC were selected to collect quantitative data, 297 forms were shared on the IHEC otherwise 218 forms are fulfill listed and bring back then 41 forms are empty, it means do not answer as usual, they did not respond in an optimal manner, 38 form did not return back. The conclusion was derived from this phase. The result of this study were displayed by the research question arrange.

The investigation procedure begins with descriptive statistics of questionnaires nearly present IHEC procedure by employee and manager. The researcher explores the employee and manager' attitudes towards the impact of IHEC system in learning regarding the employee and manager opinions. After that, the examination of employee and manager attitudes about the IHEC system were obtainable which the information collected by survey.

### 4.1 Hypothesis Testing

To test the hypothesis, Pearson correlation tests were carried out to find the correlation among the dependent variable and the independent variables of which the dependent variable is customer satisfaction while the dependent variables are time, cost, security, accuracy and quality service. The correlation coefficient is denoted ( $r$ ). Two hypothesis to be tested having the null hypothesis and the alternate hypothesis, if the significant value is less 0.5 is significant and therefore accept the alternate hypothesis and reject the null hypothesis, ( $P < 0.5$ ).

#### 4.1.1 First Hypothesis

H0: there is no relevant impact between consumer satisfaction and time

H1: there is relevant impact between consumer satis-

**Table 2.** Customer satisfaction and time

		Correlations	
		Customer satisfaction	Time
Customer satisfaction	Pearson Correlation	1	.502**
	Sig. (2-tailed)		.000
	N	320	320
Time	Pearson Correlation	.502**	1
	Sig. (2-tailed)	.000	
	N	320	320

\*\* Correlation is significant at the 0.01 level (2-tailed)

**Table 3.** Customer satisfaction and cost

		Correlations	
		Customer satisfaction	Time
Customer satisfaction	Pearson Correlation	1	.399**
	Sig. (2-tailed)		.000
	N	320	320
Cost	Pearson Correlation	.399**	1
	Sig. (2-tailed)	.000	
	N	320	320

\*\* Correlation is significant at the 0.01 level (2-tailed)

faction and time

Table 2 illustrates the Pearson Product Moment correlation which was added to analyze the relationship between the impact of Customer Satisfaction and time. There was a positive correlation between the two variables which is  $r = 0.502$ ,  $N = 320$ ,  $P = .000$ . Table 2 indicates that there is a strong positive correlation between customer satisfaction and time, which means that there is a positive relationship between Customer Satisfaction and time variables seeing that the value is close to 1. Sig. 2-tailed indicate there is significant relationship between Consumer Satisfaction and time.

#### 4.1.2 Second Hypothesis

H0: there is no relevant impact between consumer satisfaction and cost

H1: there is relevant impact between consumer satisfaction and cost

Table 3 illustrates the Pearson Product Moment correlation which was calculated to analyze the relationship between the impact of Customer Satisfaction

**Table 4.** Customer satisfaction and security

		Correlations	
		Customer satisfaction	Time
Customer satisfaction	Pearson Correlation	1	.399**
	Sig. (2-tailed)		.000
	N	320	320
Security	Pearson Correlation	.399**	1
	Sig. (2-tailed)	.000	
	N	320	320

\*\* Correlation is significant at the 0.01 level (2-tailed)

and cost. There was a positive correlation between the two variables which is  $r = 0.399$ ,  $N = 320$ ,  $P = .000$ . Table 3 indicates that there is a strong positive correlation between customer satisfaction and cost, which means that there is a positive relationship between Customer Satisfaction and cost variables seeing that the value is close to 1. Sig. 2-tailed indicate there is significant association between Consumer Satisfaction and cost.

#### 4.1.3 Third Hypothesis

H0: there is no relevant impact between consumer satisfaction and security

H1: there is relevant impact between consumer satisfaction and security

Table 4 illustrates the Pearson Product Moment correlation which was computed to analyze the relationship between the impact of Customer Satisfaction and security. There was a positive correlation between the two variables which is  $r = 0.399$ ,  $N = 320$ ,  $P = .000$ . Table 4 indicates that there is a strong positive correlation between consumer satisfaction and security, which means that there is a positive relationship between Consumer Satisfaction and security variables seeing that the value is close to 1. Sig. 2-tailed indicate there is significant association between Consumer Satisfaction and security.

#### 4.1.4 Fourth Hypothesis

H0: there is no relevant impact between Accuracy and consumer satisfaction

H1: there is relevant impact between Accuracy and consumer satisfaction

Table 5 illustrates the Pearson Product Moment correlation which was computed to analyze the relationship between the impact of Customer Satisfaction and Accuracy. There was a positive correlation be-

**Table 5.** Customer satisfaction and Accuracy

Correlations			
		Customer satisfaction	Time
Customer satisfaction	Pearson Correlation	1	.427**
	Sig. (2-tailed)		.000
	N	320	320
Accuracy	Pearson Correlation	.427**	1
	Sig. (2-tailed)	.000	
	N	320	320

\*\* Correlation is significant at the 0.01 level (2-tailed)

**Table 6.** Customer satisfaction and Quality Service

Correlations			
		Customer satisfaction	Time
Customer satisfaction	Pearson Correlation	1	.266**
	Sig. (2-tailed)		.000
	N	320	320
Quality Service	Pearson Correlation	.266**	1
	Sig. (2-tailed)	.000	
	N	320	320

\*\* Correlation is significant at the 0.01 level (2-tailed)

tween the two variables which is  $r = 0.427$ ,  $N = 320$ ,  $P = .000$ . Table 5 indicates that there is a strong positive correlation between customer satisfaction and Accuracy, which means that there is a positive relationship between Customer Satisfaction and Accuracy variables seeing that the value is close to 1. Sig. 2-tailed indicate there is significant association between accuracy and consumer satisfaction.

**4.1.5 Fifth Hypothesis**

H0: there is no relevant impact between Quality Service and consumer satisfaction

H1: there is relevant impact between Quality Service and customer satisfaction

Table 6 illustrates the Pearson Product Moment correlation which was computed to analyze the relationship between the impact of Customer Satisfaction and Quality Service. There was a positive correlation between the two variables which is  $r = 0.266$ ,  $N = 320$ ,  $P = .000$ . Table 6 indicates that there is a strong positive correlation between customer satisfaction and

**Table 7.** Model Summary of First Hypothesis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.502a	.252	.250	.50610

a Prediction (Constant) ,time

**Table 8.** ANOVA of First Hypothesis

ANOVAa					
Model	Sum of Square	Df	Mean Square	F	Sig.
1 Regression	27.508	1	27.508	107.396	.000b
1 Residual	81.452	318	.256		
Total	108.961	319			

a Dependent Variable: consumer satisfaction

b Analyst: (Constant) , time

Quality Service, which means that there is a positive relationship between Customer Satisfaction and Quality Service variables seeing that the value is close to 1. Sig. 2-tailed indicate there is significant relationship between Customer Satisfaction and Quality Service.

**4.2 Regression Analysis Result**

Linear regression tests were done in other to test the hypothesis developed for this study in order to find the relationships among the dependent variable and the independent variables.

**4.2.1 First Hypothesis**

H0: there is no relevant impact between time and consumer satisfaction

H1: there is relevant impact between time and consumer satisfaction

Table 7 illustrates R as the correlation which is 0.502 showing the degree of correlation. R shows how much total variation of dependent variable Customer satisfaction explained by independent variable time. .252 (25.2) which depicts that 25.2% of the total variance of Customer satisfaction on electronic banking has been explained.

Table 8 illustrates the Regression result, the Anova represents how well the Regression equation its fitted predicting the dependent Variable which is significant of which if it's less 0.5,  $F = 107.396$ ,  $df = 1,318$ ,  $P < 0.0005$ .

Table 9 illustrates the Coefficients table showing the unstandardized and standardized coefficients con-

**Table 9.** Coefficients of First Hypothesis

Co efficient a					
Model	Unstand aridized Co efficient		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta		
1 Constant	0.976	0.107		9.103	0
1 Time	0.598	0.058	0.502	10.363	0

a Dependent Variable: consumer satisfaction

**Table 10.** Model Summary of Second Hypothesis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.399a	.16	.157	.53662

a Prediction (Constant) ,cost

tributing whether the model is statistically significant and predicting the variables. Beta standard coefficient is showing the estimate from the Regression analysis so that the variance of the dependent and independent variable will be close to 1. R square Coefficient of 0.502 indicates that Customer Satisfaction has 50.2% impact on time, showing the Beta=0.502. Therefore, Table 9, 10, and Table 11 illustrates the data test carried out using Regression Analysis (Linear) between Customer Satisfaction and time. Customer Satisfaction has impact on time as indicated 0.502, which shows that Customer satisfaction has 50.2% impact on time. Hence, H1 states that Customer Satisfaction on electronic banking is related to time and its significant, with positive therefore, the alternate hypothesis is accepted while null hypothesis is rejected.

#### 4.2.2 Second Hypothesis

H0: there is no relevant impact between cost and consumer satisfaction

H1: there is relevant impact between cost and consumer satisfaction

Table 10 illustrates R as the correlation which is 0.399 showing the degree of correlation. R shows how much total variation of dependent variable Customer satisfaction explained by independent variable cost .160 (16.0) which depicts that 16.0% of the total variance of Customer satisfaction on electronic banking has been explained.

Table 11 illustrates the Regression result, the Anova represents how well the Regression equation its fitted predicting the dependent Variable which is significant of which if it's less 0.5,  $F = 60.388$ ,  $df 1,318$ ,  $P <$

**Table 11.** ANOVA of Second Hypothesis

ANOVAa					
Model	Sum of Square	Df	Mean Square	F	Sig.
1 Regression	17.389	1	17.389	60.388	.000b
1 Residual	91.571	318	.288		
Total	108.961	319			

a Dependent Variable: consumer satisfaction

b Analyst: (Constant) , cost

**Table 12.** Coefficients of Second Hypothesis

Co efficient a					
Model	Unstand aridized Co efficient		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta		
1 Constant	1.396	0.089		15.677	0
1 Cost	0.356	0.046	0.399	7.771	0

a Dependent Variable: consumer satisfaction

0.0005.

Table 12 illustrates the Coefficients table showing the unstandardized and standardized coefficients contributing whether the model is statistically significant and predicting the variables. Beta standard coefficient is showing the estimate from the Regression analysis so that the variance of the dependent and independent variable will be close to 1. R square Coefficient of 0.399 indicates that Customer Satisfaction has 39.9% impact on cost, showing the Beta=0.399. Therefore, Table 12, 13 and Table 14 illustrates the data test carried out using Regression Analysis (Linear) between Customer Satisfaction and cost. Customer Satisfaction has impact on time as indicated 0.502, which shows that Customer satisfaction has 50.2% impact on cost. Hence, H1 states that Customer Satisfaction on electronic banking is related to cost and its significant, with positive impact therefore, the alternate hypothesis is accepted while null hypothesis is rejected.

#### 4.2.3 Third Hypothesis

H0: there is no relevant impact between accuracy and consumer satisfaction

H1: there is relevant impact between accuracy and consumer satisfaction

Table 13 illustrates R as the correlation which is 0.427 showing the degree of correlation. R shows how much total variation of dependent variable Customer

**Table 13.** Model Summary of Third Hypothesis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427a	.183	.18	.52921

a Prediction (Constant) ,accuracy

**Table 14.** ANOVA of Third Hypothesis

ANOVAa					
Model	Sum of Square	Df	Mean Square	F	Sig.
1 Regression	19.901	1	19.901	71.058	.000b
Residual	89.06	318	.28		
Total	108.961	319			

a Dependent Variable: consumer satisfaction

b Forecasters: (Constant) , accuracy

**Table 15.** Coefficients of Third Hypothesis

Co efficient a					
Model	Unstand aridized Co efficient		Standardized Coefficient	t	Sig.
	B	Std. Error	Beta		
1 Constant	1.211	0.104		11.703	0
Accuracy	0.499	0.059	0.427	8.43	0

a Dependent Variable: consumer satisfaction

satisfaction explained by independent variable accuracy .183 (18.3) which depicts that 18.3% of the total variance of Customer satisfaction on electronic banking has been explained.

Table 14 illustrates the Regression result, the Anova represents how well the Regression equation its fitted predicting the dependent Variable which is significant of which if it's less 0.5, F= 71.058, df 1,318, P < 0.0005.

Table 15 illustrates the Coefficients table showing the unstandardized and standardized coefficients contributing whether the model is statistically significant and predicting the variables. Beta standard coefficient is showing the estimate from the Regression analysis so that the variance of the dependent and independent variable will be close to 1. R square Coefficient of 0.427 indicates that Customer Satisfaction has 42.7% impact on accuracy, showing the Beta=0.427. Therefore, table 15, table 16; table 17 illustrates the data test carried out using Regression Analysis (Linear) between Customer Satisfaction and

**Table 16.** Model Summary of Fourth Hypothesis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.399a	.159	.156	.53684

a Prediction (Constant) ,security

**Table 17.** ANOVA of Fourth Hypothesis

ANOVAa					
Model	Sum of Square	Df	Mean Square	F	Sig.
1 Regression	17.314	1	17.314	60.077	.000b
Residual	91.647	318	.288		
Total	108.961	319			

a Dependent Variable: consumer satisfaction

b Predictors: (Constant) , security

cost. Customer Satisfaction has impact on accuracy as indicated 0.427, which shows that Customer satisfaction has 42.7 % impact on accuracy. Hence, H1 states that Customer Satisfaction on electronic banking is related to accuracy and its significant, with positive impact therefore, the alternate hypothesis is accepted while null hypothesis is rejected.

#### 4.2.4 Fourth Hypothesis

H0: there is no relevant impact between security and consumer satisfaction

H1: there is relevant impact between security and consumer satisfaction

Table 16 illustrates R as the correlation which is 0.399 showing the degree of correlation. R shows how much total variation of dependent variable Customer satisfaction explained by independent variable security .159 (15.9) which depicts that 15.9% of the total variance of Customer satisfaction on electronic banking has been explained.

Table 17 illustrates the Regression result, the Anova represents how well the Regression equation its fitted predicting the dependent Variable which is significant of which if it's less 0.5, F= 60.077, df 1,318,P < 0.0005.

Table 18 illustrates the Coefficients table showing the unstandardized and standardized coefficients contributing whether the model is statistically significant and predicting the variables. Beta standard coefficient is showing the estimate from the Regression analysis so that the variance of the dependent and independent variable will be close to 1. R square Coefficient of

**Table 18.** Coefficients of Fourth Hypothesis

Co efficientes a					
Model	Unstand aridized Co efficientes		Standardized Coefficientes	t	Sig.
	B	Std. Error	Beta		
Constant	1.111	0.124		8.928	0
1 Security	0.532	0.069	0.399	7.751	0

a Dependent Variable: consumer satisfaction

**Table 19.** Model Summary of Fifth Hypothesis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.266a	.071	.068	.56431

a Prediction (Constant) ,quality service

0.399 indicates that Customer Satisfaction has 39.9% impact on security, showing the Beta=0.399.

Therefore, table 18, table 19; table 20 illustrates the test carried out using Regression Analysis (Linear) between Customer Satisfaction and security. Customer Satisfaction has impact on security as the Beta indicated 0.399, which shows that Customer satisfaction has 39.9% impact on security. Hence, H1 states that Customer Satisfaction on electronic banking is related to security and its significant, with positive impact therefore, the alternate hypothesis is accepted while null hypothesis is rejected.

#### 4.2.5 Fifth Hypothesis

H0: there is no relevant impact between quality service and consumer satisfaction

H1: there is relevant impact between quality service and consumer satisfaction

Table 19 illustrates R as the correlation which is 0.266 showing the degree of correlation. R shows how much total variation of dependent variable Customer satisfaction explained by independent variable accuracy .071 (.71) which depicts that 71.0% of the total variance of Customer satisfaction on electronic banking has been explained.

Table 20 illustrates the Regression result, the Anova represents how well the Regression equation its fitted predicting the dependent Variable which is significant of which if it's less 0.5,  $F = 24.158$ ,  $df 1,318$ ,  $P < 0.0005$ .

Table 21 illustrates the Coefficients table showing the unstandardized and standardized coefficients con-

**Table 20.** ANOVA of Fifth Hypothesis

ANOVAa					
Model	Sum of Square	Df	Mean Square	F	Sig.
Regression	7.693	1	7.693	24.158	.000b
1 Residual	101.267	318	.318		
Total	108.961	319			

a Dependent Variable: consumer satisfaction

b Predictors: (Constant) , quality service

**Table 21.** Coefficients of Fifth Hypothesis

Co efficientes a					
Model	Unstand aridized Co efficientes		Standardized Coefficientes	t	Sig.
	B	Std. Error	Beta		
Constant	1.371	0.141		9.714	0
1 Quality Service	0.337	0.068	0.266	4.915	0

a Dependent Variable: consumer satisfaction

tributing whether the model is statistically significant and predicting the variables. Beta standard coefficient is showing the estimate from the Regression analysis so that the variance of the dependent and independent variable will be close to 1. R square Coefficient of 0.266 indicates that Customer Satisfaction has 26.6% impact on quality service, showing the Beta=0.26.6.

Therefore, Table 19, 20 and 21 illustrates the test carried out using Regression Analysis (Linear) between Customer Satisfaction and security. Customer Satisfaction has impact on security as the Beta indicated 0.399, which shows that Customer satisfaction has 26.6% impact on quality service. Hence, H1 states that Customer Satisfaction on electronic banking is related to quality service and its significant, with positive impact therefore, the alternate hypothesis is accepted while null hypothesis is rejected

Having five independent variables and a dependent variable. The Beta value for time H1 =0.502 of which the alternate hypothesis was accepted shows positive significant. Hence, customers are satisfied with time variable using electronic banking. The beta value for independent variable cost H1 = 0.399 of which the alternate hypothesis was accepted shows positive significant. Hence, customers are satisfied with the cost variable using electronic banking. The beta value for security H1 = 0.427 of which the alternate hypothesis was accepted shows positive significant. Hence,

customers are satisfied with the security variable using electronic banking. The beta value for accuracy  $H1 = 0.399$  of which the alternate hypothesis was accepted shows positive significant. Hence, customers are satisfied with the accuracy variable using electronic banking. The beta value for quality service  $H1 = 0.266$  of which the alternate hypothesis was accepted shows positive significant. Hence, customers are satisfied with the quality service variable using electronic banking

## 5 Conclusion

As the argument, research and gatherings proceed in different parts of the Iraqi government in regards to the misrepresentation issues in various areas, and numerous reformative gatherings concoct diverse techniques, thoughts and instances of extortion end frameworks, it gives the idea that the free high appointive commission has discovered its most ideal approach to dispose of the recorded misrepresentation previously, by changing from manual decision framework to the biometric framework. Races add to equitable improvement, and for the most part when its result – the outcomes it produces, is worthy to all contending performing artists, in various words it undermines the vote based request when decision results neglect to give a victor and decline into a brutal clash between the member parties. This examination inquire about has given a far reaching and intensive examination concerning how the utilization of an innovation enhance framework like the biometric framework in the constituent procedure added to a reasonable decision's result or not.

It has noticed that the potential for conveying biometric innovation to fix decision misrepresentation is huge. Specifically, the understanding of biometric voter enlistment and electronic biometric voter check spoke to a critical leap forward in the modernization of the constituent procedure and improvement of its uprightness. Additionally, it has animated high voter certainty, trust, and enthusiasm for the race procedure. The study pictures four basic factors, for example, biometric innovation selection, voter certainty and trust, the effect of the new framework on extortion end, and the expense. To begin with, the sending of biometric innovation in decisions is definitely not a basic extra to the current constituent process, yet rather conveying biometrics can be a mind boggling and testing try. To send biometrics in the decision procedure, the nation needs to confront numerous authoritative, legitimate, political, strategic, social and ecological difficulties. The new system deployment needs significant support from government and a very open mindset from the independent high electoral commission members to adopt the changes and

overcome its frustration. In our survey, we have asked some staff members about their feelings towards the change, and the results appear to be delightful. Besides the fear of change and accommodating the technology innovations, most of the staff members are looking forward to seeing the new findings.

Second, biometric innovation has a modernizing sway on building up nations' decision forms that had relied upon customary methods of voter enrollment and casting a ballot. Its ability to animate voter trust in the discretionary procedure could convert into high voter support and sustaining of vote based qualities, and catalyzes extending incipient vote based systems in Africa and somewhere else. Proof from 'fizzled majority rules systems in other African nation's shows that without a profound trust in the race instruments by the electorate, vote based system will undoubtedly endure' (interviews, MPS, March 2016). Therefore, what is required is the power of the biometric innovation to surmount decision the executive's difficulties to turn away vote based disaster. This requires enhancing the prevalence of the human and specialized instruments to accomplish the trustworthiness of races.

This examination lets it be known did not have the broad scope of measures that would have allowed a comprehensive appraisal of the general population's information and impression of how biometric innovation shapes races in creating majority rule governments. It is fundamental for future research to consider innovative mistakes concerning the idea of programming and mechanical appearances utilized in a biometric framework to get a progressively energetic and more inside and out picture about the connection between biometric innovation and governmental issues/majority rule government. Third, many government organizations are increasingly taking up biometrics for identification and authentication applications. Speed, accuracy, and efficiency are some of the reasons why biometrics is now considered to be the future of human identification. Biometrics is changing the way people are identified, and voter registration is not an exception. Using biometric registration in the election process makes fraud attempts almost impossible. And duplicate votes are easy to detect in the categorizing voices process.

Four, existing systems may have taken years to develop and stabilize and to replace it with a new system can claim a lot of studies, time, efforts and financial planning. Replacing the old tradition system with a new tech system can be costly at the beginning. However, a biometric system can save the government a lot of money in the long run. The biometric system does not need a big maintenance budget. Democracy

is believed to be the best system of government, in which each eligible voter can contribute. However, taking the viewpoint of each citizen is a huge and difficult endeavor with its different challenges, voter identification being one of them. Present-day status of election process around the world is seemingly better than ever, and that is because of the technology innovations [23].

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